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Printed in Canada

HEALTH AND UNEMPLOYMENT

Some Studies
of Their Relationships

By

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PUBLISHED FOR MCGILL UNIVERSITY

BY THE

OXFORD UNIVERSITY PRESS

1938

ACKNOWLEDGMENTS

THE co-operation of a great number of people has made this book possible. First acknowledgment must go to Dr. C F Blackler, research assistant in the Department of Public Health and Preventive Medicine at McGill University during 1933-5, and now Medical Officer of Health for the city of Kingston, Ontario. Dr. Blackler, in undertaking the two surveys of unemployed adults and juveniles recorded in Parts II and III, bore a major share of the medical examination work. He is however not necessarily committed by statements made in other parts of the book. These surveys were facilitated by the co-operation of several agencies dealing with the unemployed, namely, the Bureau for Office Workers, the Protestant Employment Bureau, the Vitre Street Refuge, the Day Shelter for Unemployed Men, the Montreal Boys' Association, and the Young Men's Christian Association. The findings on the employed group used as a comparison for the adults were made available by the committee which directed the health survey of industrial workers in Quebec. This committee consisted of representatives from the Provincial Bureau of Health, the Canadian Tuberculosis Association, and the Department of Public Health and Preventive Medicine of McGill University.

Thanks are especially due to Dr. J. Wendell MacLeod, Miss K. Dickson, R.N., and their colleagues in the Social-Medicine Study Group of Montreal, for the material on family nutrition (Chapter 19); and to Mr Grant Lathe, B A., another member of this Group, for the collection of the health data relating to selected groups of school children (Chapter 17). An equal expression of gratitude is recorded to Miss Esther M. Beith and the staff of the Child Welfare Association for the collection of figures on infant weights, and for their assistance in the nutrition studies; and to Miss Gwyneth Howell and other workers in the Family Welfare Association for the material on social agency cases.

The chapters on the present status of medical care for the unemployed were made possible through the courteous response to questionnaires made by relief officers and other officials across the Dominion. What the early chapters in this volume owe to other research workers in the field is

abundantly clear in the pages themselves Dr. F. G. Pedley and Miss Charlotte Whitton kindly read and made helpful commentaries on a number of chapters.

Once again the work of all the members of the Social Research Office staff, in tabulation, the preparation of diagrams, typing, etc. is acknowledged for their aid in lightening the task of Professor L. C. Marsh, who was responsible for the final compilation and the text of the book. Dr. Grant Fleming acted as consultant and collaborator throughout.

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INTRODUCTION

THIS book does not pretend to be a complete survey of health conditions among the unemployed. In some ways it is an essay in interpretation: an endeavour to suggest some of the wider implications of the limited facts which are derived from physical examinations and other medical data—in short, to emphasize the socio-economic aspects of medicine. It hopes to provide a stimulus to further research work in many parts of this field, and it is itself a plea for more.

When the first studies described in this volume were completed, it was anticipated that their results would soon be superseded by wider health surveys or government statistical enquiries relating to the condition of the relief population. This has not been the case. A systematic inventory of the Dominion's unemployed has been begun only since the advent of the National Employment Commission in 1936, but the problems of sickness, medical care, physique, nutrition among the unemployed, are still unmeasured on a national scale. Useful statistics may now be secured in a number of provinces, but they have not been co-ordinated or assessed. There is room and need for many detailed studies, even if they are only small "samples". In spite of their limitations, the present studies have been published on this account. If they provoke further attention to the problems dealt with, those who have co-operated in this work will be more than satisfied.

The background of these studies is the effect of the depression on the development of social welfare organization. When the crisis of 1929 and the depression which followed created heavy unemployment in most parts of Canada, there was little or no machinery already equipped to deal with it. Private charitable agencies existed in the larger urban centres, and a few cities had municipal relief bureaus, but none of them had large resources. From 1930 on, *ad hoc* committees of widely-differing character were set up all over the country, usually including both public officials and private citizens, to organize the distribution of general relief funds. Unification of policy and practice throughout this network is still far from having been achieved, though many changes and improvements have been made in the past seven years. A review of unemployment administration as such is not within

the scope of this book. But it is very relevant to note that attention was first directed only to immediate necessities—food allowances, temporary shelter for transients, and so forth—and has enlarged its scope since, with the growth both of experience and of evidences of need. Fuel provision, followed by the working-out of rent scales, soon had to be considered for families light is still not a uniformly accepted relief item. Clothing is still predominantly left to private effort, and allowances, where they are made, are very small. The dietary adequacy of relief budgets has been carefully examined in some areas, only superficially in others.

Medical care, until late in the depression, was not considered as an integral part of public unemployment aid. The initiative in this respect was taken by some of the larger cities and a few provinces. None of the Relief Acts passed by the federal government since 1930 includes medical costs in the "allowed items" approved for grants-in-aid. This does not mean that no medical attention whatsoever has been available. The unemployed have had recourse to the free sections of hospitals and to the services of the Victorian Order of Nurses, the Red Cross, etc. But the very shortage of supply in relation to the demand, apart altogether from administrative regulations, has limited this recourse only to the completely indigent or to extreme cases. Unemployed persons or their families, otherwise, have not been able to secure the services of a doctor except by throwing themselves on his charity. And no organized machinery has been available through which persons in need of care could be referred to appropriate agencies. The fashioning of "medical relief" systems to meet this situation has been one of the most recent developments of social welfare policy in Canada.

The first surveys described herein had these needs in mind, and their essential question was, How far are the unemployed in need of medical care? But the main purpose of the studies as a whole is the wider one of discovering, or at least making clearer, the relations between unemployment and health. What are the medical and physical implications of being unemployed or on relief? Are the unemployed in any sense a special group, or only subject to health conditions which are differentiated in some more fundamental way? This line of enquiry was followed up from adults to younger workers, to the family, to nutrition, relief budgets and income-levels only partly as a pre-conceived plan: the impressions received

from the examinations as they were made supported this as the logical procedure.

The studies which deal specifically with health conditions are six in number. The results of complete physical examinations are recorded for one thousand unemployed adults (compared with a thousand employed men), and 270 unemployed youths, both classified according to their occupational or economic status. Health factors are reviewed more generally among six hundred unemployed families on the rolls of a social agency. Weights, heights and certain other indices are compared for a wide cross-sectional group of 1,200 school children, also the weights of babies born to 420 families falling within a smaller income-range. Finally, a detailed examination of nutrition was made among a specially selected group of relief families.

This part of the book portrays only a series of trial samples drawn from strategic points in a very wide field. But because of their interrelations they may also be regarded as pictures of the same subject from different angles or at different points of time. An examination of the health and physique of unemployed adults shows that, for some at least, the causes of their present deficiencies derive from their occupational history or their early life. A group of young workers includes within its ranks some whose circumstances are similar to those which some of the adults experienced in their youth. Both of these trace back to family conditions, and to socio-economic differences which are wider than the incidence of unemployment alone.

The sequences of cause and effect, however, do not end here. There are a range of related social facts in the light of which the general indices of public health must be interpreted. The knowledge that the death rate has been continuously brought down, even during periods of depression, is often accepted too easily as an indication that all is well with the health of the people. It is undoubtedly an index of advances in medical science and public health facilities. But it does not indicate how universally and equally these benefits are secured by the people of the country, or whether the decline might not have been greater if a number of adverse circumstances had not been present. It does not indicate the prevalence of sickness, which may not reflect itself in mortality-rates for some considerable period. And it averages differences between one socio-economic class and another, or between one

region and another, which may be the essential points of attack, perhaps the only ones from which any new gains on a large scale can be won. That income-difference must be an essential part of the analysis of health surveys is now being widely accepted. The number of contemporary studies of this type on this continent, though not yet very large, is growing, and it is important to note the trend of their findings. The significance of differences in death-rates among occupational groups is best known because of its relatively long statistical history in Great Britain. Similar figures have just been made available for Canada, which open up a new train of enquiries in themselves. But part of their evidence which must be taken into account is that "occupational mortality" is not a function solely of conditions of *work*, but also of conditions of living.

Studies of social status draw some of their most detailed material from the lowest-income and dependent groups, partly because necessity at these levels is most obtrusive. The existence of both charitable and governmental aid may testify to this and bring them further into public notice. But it is highly important to ask how far the relief groups are representative of the total national problem of medical care. One of the continuous qualifications, which applies to the present enquiry and to similar ones, is that the people on relief at any moment do not include all those who are unemployed at that time, or who are subject to unemployment which keeps their average income low. There is an even wider range of wage-earner and farmer families who cannot stretch their budgets to cover doctor's, hospital, and nursing bills. The problem of securing adequate medical care for the population is not solved therefore by state assistance for those on relief: rather it brings into sharper prominence the need for organization to apply the economies of collective provision to a large section of the non-dependent community. A second implication applies more directly to the medical findings of particular surveys. The depression in its later stages has brought new groups on to the relief rolls. Many of these have never been dependent before and have held back longest from accepting relief. It is quite likely that more privation has been experienced among such individuals and families than among the chronically poor who began to receive unemployment relief at an earlier date. Because of this the general level of, e.g., nutrition might well be higher

among the long-period than among the shorter-period relief registrants. On the other hand, it is to be expected that physical handicaps and other disabilities would be more common among the "earlier" than the "later" unemployed. A health survey of the present relief population would throw much needed light on these questions, provided that careful distinctions, both of periods unemployed and of periods on relief, are preserved in the analysis.

Both these generalizations of experience, and the illustrative studies cited in Section I, serve to reinforce the conclusion that health conditions among the unemployed are only part of a larger theme. Nevertheless a question of immediate practical concern is the adequacy of such medical care facilities as are now available. A review of medical relief schemes in Canada, and their *pros* and *cons*, is therefore undertaken in the concluding section. It is evident from this that there is no room for complacency on this score. Some of the needs for medical attention disclosed by examination made in the earlier years of the depression (Sections II and III) are now being met. But this is not true of all the types of medical service which deserve consideration, nor does it apply equally to all sections of the Dominion. Standards of administration and finance are still unsatisfactory from several points of view; while preoccupation with emergency treatments hampers a proper consideration of the possibilities of preventive and rehabilitative care.

Cause and effect here stretch into the future. Poor health standards and employment handicaps among the marginal families of the community will breed a new generation of "C-3" citizens unless counteracting forces are put into operation. One question which must be considered side by side with the provision of medical care is that of nutrition. The assessment of relief budgets and even of low-wage incomes in the light of such standards as are available is, to say the least, not reassuring. Even if the network of medical, nursing, and hospital services is radically widened from its present coverage, through the institution of health insurance, the doctor is still limited in his work by the physique and environment of his patients.

The inescapable conclusion of all these studies is that much waits to be done, both in factual investigation and practical organization. Important items under the former head are large-scale measurements of the incidence of sickness and the

more common handicaps which can be used as standards or comparatives; the distribution of good and poor physique from the collation of nutrition ratings, etc. found among school children, and adults wherever groups have been examined, analysis of the medical services required by a series of typical income-groups (not the relief population alone) in a representative period, in relation both to their budgets and to available medical facilities.¹ Both in Great Britain and the United States great improvements in the statistical resources on these matters have been registered in recent years. In Britain, the health insurance scheme has been the paramount source of material, though the British Medical Association and other bodies have co-operated with the Ministry of Health in making many special enquiries. In the United States, the Public Health Service, the Milbank and other Foundations, and the monumental work of the Committee on the Costs of Medical Care come immediately to mind. What should receive special note from Canadians at the moment, however, is that a national Health Inventory is now under way (since 1935) which is partly financed from W.P.A. funds

The key-project under the second head, whatever else may be done, is a national system of health insurance. Improvement of medical relief schemes, a physical rehabilitation service, the expansion of group hospitalization plans, may precede this step or be co-ordinated with it, but they will not remove the wider need. In public health services the principle of collective provision is now almost completely accepted; it is accepted in only a modified degree in hospitals and nursing, and most recently and tentatively in its application to general practitioner, specialist, dentist, optician, and druggist. In these fields some of the administrative details which will have to be settled are of considerable importance, both to the public and to the professions. But we cannot afford to regard them as insuperable. In individual and subsidized medical costs, a huge sum is already being paid in Canada every year. Taking good and bad together, these expenditures are widely uneven, emergency-ridden, and

¹An excellent guide to fruitful topics of research in this field has just been published by the Social Science Research Council, New York (S. D. Collins and C. Tibbitts' *Research Memorandum on Social Aspects of Health in the Depression*). On a wider scale, a forthright statement of Canadian needs is *Research in the Social Services*, a memorandum submitted by Hon. G. M. Weir (Provincial Secretary for British Columbia) to the Royal Commission on Dominion-Provincial Relations, March 1938.

lacking in the co-ordination which would put them to the best effect. The choice is between this and a more efficient method of expenditure. The administrative machinery of a health insurance scheme not only provides a systematic basis for meeting immediate deficiencies in the medical care of unemployed and low-income groups, but can be made an invaluable aid in the control and development of the health standards of a major section of the population

L. C. MARSH.

Montreal,
December, 1937.

PART I
THE ELEMENTS OF THE PROBLEM

CHAPTER I

HEALTH AND ECONOMIC CONDITIONS

AFTER eight years of depression it should hardly be necessary to demand complete measurements before assuming that there are direct relationships between the employment status of individuals, families or communities, and the prevalence and duration of illness. Least of all where economic want is most evident. When the family income falls below a certain level, the standard of living declines rapidly. A small sum to spend on food usually means lack of fruit, fresh vegetables, milk and fats. Inadequate footwear and clothing increases the liability to colds and other ailments. Families move to low rent areas or "double up" to economize on rents, resulting in overcrowding, which is one of the worst evils of bad housing so far as physical health is concerned. Perhaps the worst sufferers are the "new poor", for they lack experience in living to the best advantage at low economic levels, and, in addition, their mental health is seriously jeopardized by the severe crisis through which they are struggling to make an adjustment.

In the face of widespread unemployment, members of the lowest wage classes particularly find themselves without the means for health expenditures, apart altogether from the bare necessities of life. For low earnings are insufficient to provide any but the most meagre savings.¹ Even families which were at moderate wage levels, if they experience heavy unemployment, sink to or below the level of the unskilled and irregular workers. The result is that standards of living fall in every way. There is often not money enough for food; clothing is scanty, coal becomes a luxury, housing conditions are dispiriting, and insecurity dominates the lives of both adults and young people.

While no comprehensive surveys have so far been made for Canada, there is abundant individual testimony that lower

¹For a detailed study of the reserves of working-class families, cf. E. Clague and W. Powell. *Ten Thousand Out of Work* (Univ. of Pennsylvania Press, 1933), especially pp. 95-131.

standards of living have serious effects on health. A period of economic depression does not presume an increase in those diseases which, like typhoid fever, are controlled through safeguarding water and milk supplies, or of such diseases as diphtheria which are controlled by immunization of the individual. But there are good reasons for expecting to find that the general physical and mental well-being of many groups in the community falls to a lower level.

None the less, verification of these correlations between health and economic status on any adequate scale has had to wait until relatively recent years. The first appeal has usually been made to mortality statistics. The difficulties which present themselves in a proper evaluation of this type of data are so important that they are considered separately in the succeeding chapter. But in some studies the general weight of the evidence is quite clear. Thus it was shown by Chapin, in a study of the relative mortality of taxpayers and non-taxpayers of Providence, Rhode Island, in 1865, that the rate was 10.8 per 1,000 among the taxpayers as compared with 24.8 for the non-taxpayers. (These early figures were chosen because more recent census statistics did not provide enough detail.) On a much larger scale, the informative review made by Selwyn D. Collins in 1927 contains a series of tables from authoritative sources which show consistently higher mortality rates (including infant and maternal deaths and representative diseases) among the lower wage earners as compared with the professional and economically independent classes.¹

OCCUPATIONAL DIFFERENCES

Occupational classification offers a criterion of economic status which has been more extensively used than that of either unemployment or income. The explanation of the differences in average mortality rates which are found to exist among workers of different groups is in fact more complex than for these more direct determinants. But the influences involved have become better understood as social and medical investigation has increased.

The relation is characteristically one of both cause and effect. The physical condition of the worker at all times is a factor which greatly influences his ability to obtain work of

¹C. V. Chapin "Deaths Among Taxpayers and Non-Taxpayers in Providence, R.I.". *American Journal of Public Health*, Aug. 1924. Collins' *Economic Status and Health*. U.S. Government Printing Office, Washington, D.C., 1927.

his own choice. The increasing number of industries requiring pre-employment medical examinations indicates that physical fitness is destined to become even more a determining factor in the employability of the worker. In every group of workers, there will be found a number who, at one time or another, have been rejected for certain types of work because of organic disease or physical defect. Some workers, conscious of their being less robust than others, seek lighter tasks where physical vigour is less important and medical examinations are either less exacting or not required.

Pre-employment examinations offer a useful source of data on this subject. The percentage rejected at such examinations varies from nil in some industries to as much as 40 per cent. in others, depending upon the nature of the work and the physical demands made upon the individual. The higher figure is confined to types of labour which involve great health hazards or which require a superior physique in the workman. In the majority of cases, however, the rejections are rarely more than 6 per cent., and, in many instances, are less than 2 per cent. of the applicants.¹

Direct selectivity, therefore, is not on the whole very great. Rejection, moreover, does not imply the presence of irremediable disability. Quite frequently the disorder is one which, like hernia or defective vision, could be corrected. Many individuals thus affected could be salvaged from the lower ranks of the labour market if corrective treatment could be provided, and their reluctance to undergo it overcome. Rejection at a particular plant, also, does not mean that the worker is barred from less restricted forms of work where his aptitudes might be of considerable value. A worker with a fully compensated heart condition, while not fit for the occupation of a blacksmith, could carry on as a shoemaker. The modern field of employment is full of more specialized examples where medical and personnel services could be combined.

On the other hand, it appears that workers with serious defects or disease are either removed by an early death, or are confined in their homes or cared for in an institution. They are rarely seen as applicants for employment, but they appear at refuges and relief centres in depression times if their families cannot support them.

¹Cf Metropolitan Life Insurance Co, New York Vol XIV, No 8 Statistical Bulletin for April 1933.

HEALTH AND UNEMPLOYMENT

TABLE 1a COMPARATIVE MORTALITY RATES FOR
CERTAIN OCCUPATIONS¹, ENGLAND AND WALES

(After Collis and Greenwood)

Occupation	1890-92	1900-02	1910-12
Clergymen	100	100	100
Agricultural labourers	119	111	106
Carpet makers	164	183	145
Chemical workers	262	200	147
Bricklayers, etc	188	167	149
Wool and worsted operatives	186	180	151
Paper makers	170	133	153
Silk operatives	173	173	162
Coal miners	174	164	164
Hosiery workers	131	166	166
Saddlers and harness makers	174	173	166
Lace workers	133	161	174
Printers	206	182	174
Bookbinders	199	173	179
Cabinet makers	184	172	179
Tailors	186	188	180
Commercial clerks	172	163	181
Cotton operatives	214	201	183
Shoemakers	173	175	186

TABLE 1b COMPARATIVE TUBERCULOSIS RATES FOR
CERTAIN OCCUPATIONS², ENGLAND AND WALES

(After Collis and Greenwood)

Occupation	1890-92	1900-02	1910-12
Clergymen	100	100	100
Agricultural labourers	175	155	156
Coal miners	147	160	163
Paper makers	217	262	210
Carpet makers	342	315	246
Cotton operatives	303	362	256
Wool and worsted operatives	287	296	262
Tinplate goods workers	327	394	263
Bricklayers, etc	338	355	273
Silk operatives	294	375	273
Saddlers and harness-makers	358	402	323
Lace workers	242	345	325
Commercial clerks	327	360	356
Hosiery workers	286	398	377
Tailors	408	445	383
Cabinet makers	373	409	412
Printers	491	547	421
Bookbinders	490	515	427
Shoemakers	386	483	456

¹ See footnote, p. 6.² All forms of tuberculosis 1890-92 and 1900-02, pulmonary only, 1910-12.

When these circumstances are allowed for, there still remain the factors of age distribution, mental capacities, education, and home environment, which are far from identical for different classes at the time of entry into a given occupation. None the less, some occupational correlations are well established. Some of the best known of these figures are the comparative mortality rates for a range of occupations based on the Census data and the Registrar-General's records of deaths in Great Britain. Statistical evidence has been available for a number of years from this source, for example, to show that for tin miners and dock workers, there is from two to three times the chance of an early death, as compared to clergymen and farm workers.¹ Table 1a shows the type of the English figures. While excluding certain specific occupational risks, such as silicosis among stone workers, these records are sufficiently inclusive to be representative of most employments. The indices used are the percentage ratios that each average death-rate bears to the standardized mortality rate of the clergy. Table 1b, from the same source and on a similar basis, brings out clearly the relation of occupation to tuberculosis mortality. Stone-workers, because of their proneness to tuberculous silicosis, are not included in this table, nor are tin miners. The relatively low figure for coal miners is noticeable. The rates for tuberculosis are higher in the families of coal miners than among miners themselves; whereas the tin miners (of Cornwall) have a tuberculosis mortality approximately five times that of coal miners.

Thanks to the enterprise of the Vital Statistics branch of the Dominion Bureau of Statistics, occupational mortality figures for Canada have just been made available for the first time.² Table 2 illustrates some of the most interesting results. A comparative index similar to that in Tables 1a and 1b is added, based in this case on the death-rate for teachers and allied workers. In Canada, this profession, along with farming, appears to enjoy some of the lowest death rates in Canada, while the rate for clergymen is relatively high. More detailed data would show groups with even lower rates (e.g., 4.97 for

¹Cf. Collis and Greenwood *The Health of the Industrial Worker*. (J and A. Churchill, London, 1921).

²*Special Report on Occupational Mortality in Canada, 1931-1932*. Dominion Bureau of Statistics, Ottawa, 1937. Table 2 is compiled from a fuller series given in this bulletin.

owners and managers in transportation industries only)¹ It must be remembered that all occupational mortality tables are to some extent conditioned by the closeness or width of the occupational groupings. The fact that the rates are "standardized" is also important.² Thus the actual, or

TABLE 2 COMPARATIVE MORTALITY RATES OF ADULT MALES
IN CERTAIN SELECTED OCCUPATIONS CANADA, 1931-2
(Average annual death rate per 1,000 standardized for
age distribution)³

Occupation	Death Rate	Comp Index	Occupation	Death Rate	Comp Index
All males 20-64	6 71	126	Professional engineers	7 49	141
Teachers, lecturers, professors, principals	5 32	100	Locomotive engineers, firemen	7 69	145
Farmers ⁴	5 70	107	Electrician, wiremen	7 76	146
Carpenters	5 99	113	Painters, decorators, glaziers	7 83	147
Operatives, wood manufactures	6 11	115	Mechanics	7 85	148
Drivers, deliverymen, chauffeurs	6 26	118	Plumbers, steamfitters, etc	7 88	148
Operatives, metal products manufactures	6 47	122	Textile and clothing workers	7 96	150
Owners and managers, all industries	6 83	128	Office workers	8 00	150
Stationary engineers, firemen	6 94	130	Railway conductors, brakemen, expressmen, etc	8 07	152
Cooks and other service workers	6 96	131	Compositors, printers	8 44	159
Commercial travellers	7 13	134	Policemen	8 65	163
Clergymen	7 14	134	Labourers (other than agricultural) ⁵	8 80	165
Fishermen	7 22	136	Coal miners	9 41	177
Bricklayers, etc	7 24	136	Leather workers, tanners, etc	9 52	179
Unspecified operatives, printing	7 25	136	Bakers, confectionery and biscuit makers	9 68	182
Blacksmiths, hammermen, forgemen	7 33	138	Barbers, hairdressers	9 80	184
Machinists, toolmakers	7 44	140	Workers in metal mines, quarries, oil wells, etc	9 82	185
			Operators in mineral products manufacture	12.31	231

¹ *Op. cit.*, p. 3

² Cf p 21, footnote 2.

³ The figures refer to gainfully employed males between the ages of 20 and 64. Deaths from all causes during 1931-2 are related to census groups as comparably as possible. Deaths from accidents and industrial diseases are included.

⁴ Excludes farm labourers

⁵ Includes several factory workers, also most longshoremen.

crude, death rates among office workers, drivers and delivery-men, and mechanics are higher than the standardized rates in the table because the ages of workers in these occupations are relatively low, whereas the contrary is true of e g, carpenters, blacksmiths, clergymen, and most groups of owners and managers.

Healthy or unhealthy working conditions, good or bad influences of open-air work, different liabilities to accident and other related factors, can be clearly connected with the average mortality rates prevailing in some occupations (e g, the specially heavy rates among miners, labourers, bakers, workers in stone, brick, and abrasive goods) but less so in others. Principally, this is because another and contrary influence is at work—the tendency for workers to avoid employments unsuited to their own physique or prejudicial to their particular sickness liability. Many persons who are poor health “risks” may be found therefore in light and relatively sheltered occupations. A full examination of the conditions indicated by the present table is not within the scope of this book, but these preliminaries should be enough to show that this new Canadian material calls for specific study by medical men and social students from many points of view.

A major implication of such figures, however, is that more knowledge is needed of the incidence of sickness as well as of death, and also of basic constitutional fitness. This is specially important because economic and social factors, while they may sometimes be difficult of appraisal, almost certainly affect sickness liability more than life-expectation and mortality. It is known that morbidity rates vary with occupation but it does not follow they should show the same order as do mortality. In occupations with a low mortality risk the morbidity rate may quite possibly be high, and *vice versa*. This is not merely a question of occupational strains, exposure to accidents and similar risks, but of the early health and family histories of the classes who are most likely to supply the recruits for particular occupations. And the less common it is for persons to continue most of their working life in one occupation alone, the more relevant this wider causation becomes. Because preventive medicine must make one of its primary attacks on sickness, this is an important field of study. So far, however, morbidity reports by occupation, apart from

those on industrial poisons, are not available sufficiently to permit this.¹

MORBIDITY AND ECONOMIC STATUS

In those countries which have an established system of health insurance a continuous source of information on morbidity is at hand. But on this continent only a few studies are available, although the possibility of their integration through systematic survey has recently been brought much nearer in the United States.² This evidence is well worthy of review, for wherever sickness-liability has been differentiated by reference to income-groups, a new light has been thrown on the subject of health and medical care.

One of the most intensive surveys of this type was that made by Dr Sydenstricker and other officers of the United States Public Health Service in Hagerstown, Maryland. In this city, chosen as a typical small urban centre (of about 30,000 population) some 8,000, or 1,750 families, were studied over a period of two and a half years.³ The prevalence of sickness

TABLE 3a PREVALENCE OF SICKNESS AMONG FAMILIES
CLASSIFIED BY ECONOMIC STATUS
(Hagerstown, Maryland 1921)

Economic Status*	Cases of Sickness (per 1,000 persons)	Per cent of Households Having Sickness	Number Observed	
			Households	Persons
Well-to-do and comfortable	32.2	10.3	213	808
Moderate	37.6	12.3	829	3,400
Poor and very poor	40.1	16.9	709	3,316

*The first and last classes are each amalgamations of two groups

of all kinds at the time of a preliminary visit (in 1921) was found to vary from 10 per cent. among the well-to-do households to 17 per cent. among the poor families.

Further analysis of the incidence of ailments over the two and a half year period, with corrections for the different age-distribution in the three economic status groups adopted, were more sharply indicative. Among adults, the incidence was higher for all causes of sickness taken together in the order "poor", "moderate", "comfortable", and particularly marked

¹ Cf. the indirect evidence of deaths from tuberculosis. (Chapter 6, p. 59.)

² Cf. p. 17.

³ Table 3a is from the U.S. *Public Health Reports*, Vol. 40, No. 7 (1925). Reports on other aspects of the Hagerstown study appeared in this journal at various dates from 1925 to 1929.

for respiratory infections (including influenza and grippe), rheumatism, and ailments of the nervous system.¹ So far as children's diseases were concerned, the sequence was reversed. Better reporting and attention to these ailments, while it apparently constituted some part of the explanation of this, was not proved. But a very marked differentiation was revealed in the extent to which medical attention was received. Table 3b shows the proportions for all ailments recorded, and for those in which the fact of economic status (judged from these indices alone) appeared to be most influential.

TABLE 3b PROPORTION OF CASES OF ILLNESS ATTENDED
BY PHYSICIANS, AMONG FAMILIES CLASSIFIED BY ECONOMIC STATUS
(Hagerstown, Maryland 1921-1924)

Ailments	Per cent of cases attended by physician				
	Well-to-do	Comfortable	Moderate	Poor	Very Poor
Total	70	53	47	44	43
Diseases of eyes and annexa (85)	100	88	65	53	29
Diseases of teeth and gums (108)		100	63	55	33
Diseases of respiratory system (11, 31, 97-107, 109)	63	41	35	31	32
Epidemic, endemic, and infectious diseases (1-42, excluding 11, 31)	83	75	67	57	47
Diseases of skin and cellular tissue (151-154)	80	77	53	55	44
Diseases of digestive system (110-127, part 108 and 205)	88	66	55	58	51

(Figures in brackets refer to international classification)

The forerunners of the Hagerstown study were some earlier inquiries under similar auspices made in a less privileged area, that of cotton mill villages of South Carolina. The first of these, covering 4,161 individuals in seven villages in 1916 and 1917, showed a prevalence of sickness which increased in almost direct proportion to the decrease in family income. A more detailed and continuous canvass of the incidence of sickness, among some 10,000 individuals of all ages, in twenty-four villages of the same state, showed that the lower the family income, the greater were the number of days lost from work because of illness.²

¹U S *Public Health Reports* July 26, 1929, pp. 1821-1833, from which Table 3b is extracted, and to which the reader is referred for further explanatory detail.

²See articles by E. Sydenstricker, D. G. Wiehl, *et al*, *U S Public Health Reports*, Nov. 22, 1918, June 13, 1924, and July 18, 1924.

One of the most relevant and thorough studies which has yet been made was carried out by co-operation of the U.S. Public Health Service and the Milbank Memorial Fund in 1933. The final data cover some 11,500 wage earner families from eight large cities, a group of coal-mining communities, and a group of cotton-mill villages; some provisional results, published earlier, refer to three cities.¹ In selecting families, both wealthy areas and slum districts were avoided, and in general the objective was to measure sickness among those who had been reduced to poverty by unemployment as compared with groups who had retained or fallen to moderate incomes. The changes in economic status and standard of

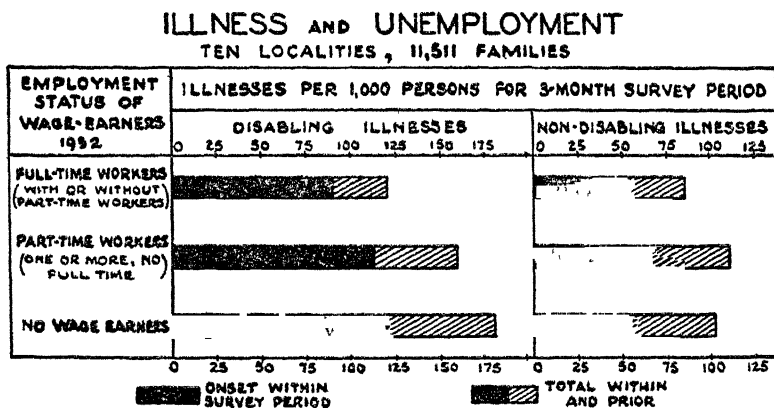


Fig 1a Incidence of illness among wage earner families classified according to employment status, ten U.S. localities

living revealed were severe. The median income of the whole group dropped from \$1,650 in 1929 to \$870 in 1932. In 1929, 82 per cent. of the families had one or more full-time workers, another 14 per cent. being dependent on part-time workers only: in 1932 the percentages were 48 and 36. Nearly one-third (32 per cent.) of the families surveyed in 1932 had less than \$600 income; of this group only 17 per cent. had been in this class in 1929, 17 per cent. had had over \$2,000 and the

¹(a) G. St. J. Perrott, S. D. Collins, *et al.* "Sickness and the Economic Depression", U.S. Public Health Reports, Vol. 48, No. 41 (Oct. 1933), (b) Relation of Sickness to Income and Income Change in 10 Surveyed Communities", U.S. Public Health Reports, Vol. 50, No. 18 (May 1935). The latter constitutes "Health and Depression Studies No. 1" of the Public Health Service and the Milbank Foundation (Figs 1a, 1b, 1c are reproduced, with minor changes of legends, by permission.)

remainder (66 per cent.) had earned between \$600 and \$2,000. The importance of this study, therefore, is that it shows not only the differential sickness-liabilities among income-classes, but some of the relations of sickness to income change.

The principal results, showing the incidence of illness in relation to unemployment and to income are reproduced in Figs. 1a, 1b, and 1c. The rate of disabling illnesses, on the

DISABLING ILLNESS AND INCOME EIGHT CITIES, 7,436 FAMILIES

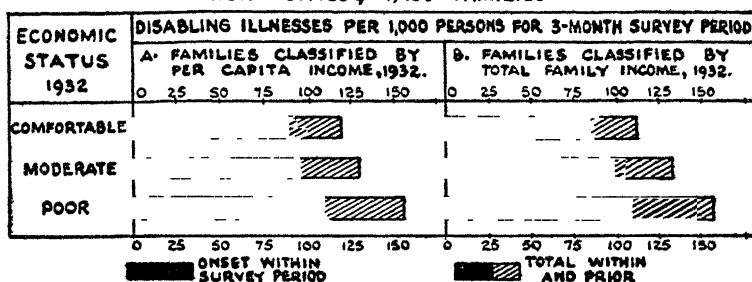


Fig. 1b Incidence of disabling illness among wage earner families, classified according to income status, eight U S. cities

DISABLING ILLNESS AND CHANGE IN PER CAPITA INCOME EIGHT CITIES

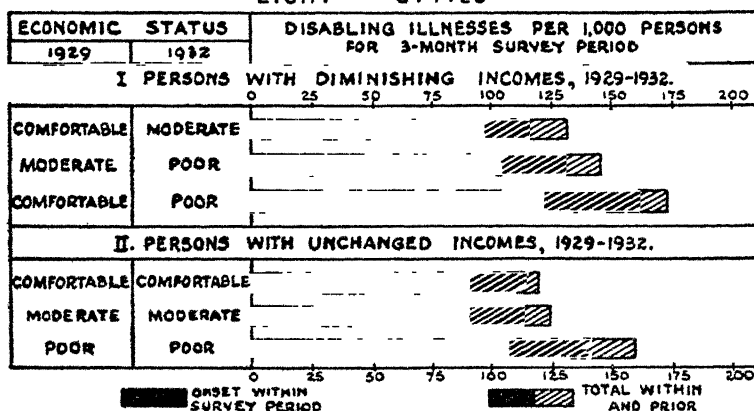


Fig. 1c. Incidence of disabling illness among families classified according to change in income 1929-1932, eight U S. cities

average, is 48 per cent. higher among the unemployed families than among those with full-time workers, and this divergence was shown in each of the cities separately. If income instead of employment is used as the criterion, this divergence becomes somewhat wider. This is particularly true for illnesses of onset prior to the survey period, which are largely chronic; this is especially an association which may be one of either cause or effect.

But in addition it was clearly shown that the burden of illness is related to decline in income. The average results for the full sample revealed that the illness rate of the group which dropped from comfortable circumstances to comparative poverty within three years, was 45 per cent. higher than among persons of similar economic status in 1929 who suffered no change in their economic fortunes during that period. The corresponding figure from the preliminary data for three cities, viz., 60 per cent, shows that this divergence may be considerably higher in some cases. Using classifications suitable for averaging all the communities concerned, the more detailed changes observed are particularly interesting. (a) "The group that had dropped from comfortable to moderate showed a 10 per cent. higher disabling illness rate than the comfortable group that had experienced no drop in income"; (b) "the group that had dropped from moderate to poor showed a 17 per cent higher illness rate than those who were in moderate circumstances throughout the four years"; while (c) "the illness among the group that had fallen from comfortable to poor circumstances was 9 per cent. higher than that among the chronic poor, i.e., those who were in poverty even in 1929". The findings in this survey, moreover, were "true for children as well as for adults, and in general for respiratory and non-respiratory illnesses, with the exception of the communicable diseases of childhood".

The inference that these higher illness rates are directly due to reduced standards of living is carefully evaluated by the investigators, particularly the alternative hypothesis that those who suffered most from unemployment were in any case more prone to sickness or in other ways the less efficient. Their verdict is worth quoting:

The writers admit the possibility that selection played a part in bringing about the situation observed in 1933, but it does not seem probable that selection of the less fit by the depression screen is the

whole story. Undoubtedly, those who became unemployed during the depression were, on the average, the least well equipped to compete in the keen struggle for jobs. For example, when we compare the "new poor" in the surveyed group with those who remained comfortable throughout the depression, we find that they had fewer household heads with high school or college education, fewer in the white-collar occupations in 1929, that they lived in more crowded living quarters even in 1929, and exhibited a higher birth rate. Some of these findings appear to indicate that families of certain types were least successful in weathering the depression. However, it seems highly improbable that a theory of selection contains the sole explanation of the results of the present survey. As a matter of fact, when illness rates are made specific for age, sex, race, education, occupation, and relief status, the association between drop in income and high illness rate is still evident.

It is necessary to remember that this is not a picture drawn only from families on relief, but from a very much larger wage earner group. Only about one-fifth of the total sample were on relief at the date of the survey. It is even more important to remember that the extent of unemployment has not radically diminished. In the course of five years, new groups have been brought down to the relief level and some of the "new poor" families have become chronic cases.

In the United States the reports of the Committee on the Costs of Medical Care have had a great influence in establishing the principal facts of the variation in medical treatment throughout the income-scale. The Committee's inquiries cover a wider range than any other survey has essayed (six groups, from families with under \$1,200 income to those with over \$10,000 a year), and their data are drawn from 130 communities of varied type. Table 4a shows the relative distribution of the total amount of medical care of all kinds reported by the 8,639 families in the survey (during 1928-31). Table 4b is still more indicative in showing the percentages of *illnesses which received care* in various ways.

The preponderant figure, the proportion of cases of illness which were attended by a physician, varies from 54 per cent in the lowest group to 66 per cent in the higher. In interpreting this, it must be remembered that doctors in hospitals and clinics are included here, not those in private practice alone. Other studies have shown that the spread for disabling illness is much greater.¹

¹Cf. M. C. Klem, *Medical Care and Costs in Californian Families in Relation to Economic Status* (State Relief Administration of California, San Francisco, 1935.)

Specialist treatment was secured in only 4 per cent. of the low-income cases as compared with 26 per cent. among the high-income families. Dental service, which is particularly significant, also shows an extreme range, increasing from 30 per cent. of all families at the lowest level, to over 90 per

TABLE 4a MEDICAL CARE IN RELATION TO FAMILY INCOME
(a) Percentage of Families Receiving Certain Medical Services

Type of Service	\$10,000 and over	\$5,000- \$10,000	\$3,000- \$5,000	\$2,000- \$3,000	\$1,200- \$2,000	Under \$1,200
Physicians ¹	96.2	91.3	89.3	86.8	83.9	82.0
Hospitals	33.9	26.9	22.2	20.8	17.1	20.1
Nursing	31.0	20.0	14.3	13.7	17.1	22.9
Nursing, exclusive of free visiting nursing	31.0	17.9	10.9	8.6	7.2	4.1
Surgery	31.7	25.8	22.4	22.5	19.0	18.5
Dentistry	91.5	77.1	64.3	54.3	43.9	30.4
Refractions and glasses	36.1	24.8	18.1	12.9	9.4	8.6
Medicines	97.6	98.2	98.1	97.1	97.2	94.5
Secondary practitioners and cultists	24.2	15.6	11.9	7.8	6.3	5.5

Source: *The Incidence of Illness*, Publication No. 26 of the Committee on the Costs of Medical Care, p. 92 (Reproduced by permission.)

TABLE 4b MEDICAL CARE IN RELATION TO FAMILY INCOME
(b) Percentage of Illness Which Received Medical Treatment*

Type of Treatment	\$10,000 and over	\$5,000- \$10,000	\$3,000- \$5,000	\$2,000- \$3,000	\$1,200- \$2,000	Under \$1,200
General practitioner	66.2	65.7	64.3	66.8	62.8	53.7
Specialist	26.4	20.2	12.8	10.2	6.3	3.6
Surgery, all kinds	8.8	8.3	7.4	8.3	6.9	6.4
Surgery, in hospital only	5.9	5.7	4.7	4.9	4.1	4.2
Hospital	8.6	8.2	7.3	7.4	6.6	7.4
Clinic	0.9	2.8	3.8	3.8	6.8	9.9
Nursing, all kinds	11.5	6.2	5.0	5.4	7.5	10.7
Special nurses in hospital	5.7	2.9	1.8	1.2	0.8	0.5
Laboratory and X-ray	20.7	16.9	11.4	9.6	8.7	7.6
Secondary and cultists	5.9	6.7	4.2	3.2	2.5	1.7
All Treatments ²	92.7	89.0	81.4	80.4	75.0	66.5

*Excludes health examinations, immunizations, dental and eye treatment where no illness was involved, includes minor non-disabling illness and well-baby care.

Source: *The Incidence of Illness*, Publication 26 of Committee on Costs of Medical Care, p. 282 (Reproduced by permission.)

¹Including specialists, oculists, health examinations, etc.

²Excludes treatment from druggist, nurse, neighbour, or lay member of family if serving without attendant.

cent. among the wealthy families (The percentages for all persons in the families vary from 10 up to 60 per cent.) Hospital attention, as is fairly well known, has certain special features. It is resorted to most heavily by the lowest income classes and the highest, with lower rates of hospitalization characteristic among some of the middle groups. Whereas expense is the obstacle for the latter, the explanation of the high rate among working class families is partly the availability of free services, partly because illnesses are more frequently borne until they reach an emergency stage. Nursing is also more common than general practitioner service among low income families, because it is cheaper.¹

Even the important results of the work of the Committee on the Cost of Medical Care will give place in some respects to the major survey which was placed under way at the end of 1935 with the aid of grants from the Works Progress Administration. The survey will cover nearly three million persons in over one hundred selected communities. Its aim is to provide the facts from which a broad national health programme can be evolved, and the data chosen for this purpose comprise (a) the social and economic status of the families (occupation, income, housing, etc.) (b) the incidence and duration of illnesses and disabilities, and (c) the kind and amount of treatment received. A few preliminary reports on the results of the survey as a whole have been issued and one of these, which classifies illness according to income-levels² shows the following strongly-marked differences:

Illnesses disabling for one week or longer in a 12-month period occurred among families on relief at a rate 57 per cent. higher than among families with annual incomes of \$3,000 and over. Considering illnesses broadly classified by cause, it was found that the highest frequency rates observed for both acute and chronic illness were those of the population on relief; for acute illness, the excess for the relief group was 47 per cent., for chronic illness, 87 per cent., compared with the rates for the highest income class. During the survey year, two persons on relief were disabled for one week or longer by chronic illness for every person in the middle and highest income groups. Persons in families just above the relief level (income under \$1,000) experienced an illness rate

¹For these and further details of I. S. Falk, M. C. Klem, and N. Sinai: Committee on the Costs of Medical Care. Publication No. 26. *The Incidence of Illness and the Receipt and Costs of Medical Care* (University of Chicago Press, 1933).

²The National Health Survey, 1935-6. *Illness and Medical Care in Relation to Economic Status*. Preliminary Reports, Bulletin No. 2 (mimeographed) U. S. Public Health Service, Washington, D. C., 1938.

lower than the relief population, but 17 per cent. higher than the rate for the highest income class. The major part of this excess was due to the greater frequency of chronic illness, for which the rate was 42 per cent. higher than that in families with incomes in excess of \$3,000.

The summary continues:

The part played by illness in causing dependency is indicated by the extent to which disabling illness incapacitates the wage-earner. In the present survey . . . it was found that one in 250 family heads in the comfortable income group was not seeking work because of chronic disability. In non-relief families with incomes under \$1,000, the ratio was one in 33, while in relief families, one in every 20 family heads was unable to seek work because of disability. Loss of employability through illness places a burden on wage-earners of low income families which results in their concentration among the dependent.

TABLE 5. SOME RESULTS FROM THE U S HEALTH INVENTORY (ONE CITY ONLY, 1935-6)

Factor Measured (on annual basis)	\$2,000 and over	\$1,000 \$1,999	Under \$1,000	Relief
Disabling Illness (All persons)				
Acute (per 1,000 persons)	160	129	140	176
Chronic (per 1,000 persons)	38	37	41	73
Disabling Illness (Employed Males 25-64 only)				
Acute (per 1,000)		56*	63	86
Chronic (per 1,000)		18*	22	32
Disabling Illness (Unemployed Males 25-64 only) ¹				
Acute (per 1,000)		66*	61	64
Chronic (per 1,000)		112*	117	99
Period of Disability (All persons)				
Acute (days per person)	2.9	2.7	3.1	3.8
Chronic (days per person)	4.2	4.4	6.9	12.1
Physicians' Calls for Disabling Illness				
Total Calls ² (per person)	0.74	0.34	0.48	0.68
Home Calls (per person)	0.56	0.20	0.26	0.25
Periods in Hospital				
Total (days per person)	0.27	0.53	1.18	1.24
Excluding 12 month cases (days per person)	0.27	0.26	0.43	0.69

Abstracted, by permission, from Perrot and Holland, *op cit* Tables 7, 9, 10.
 "Disabling" means for seven consecutive days or longer. "Acute" means duration of disease symptoms less than 3 months, "chronic" more than 3 months.

* Includes persons not on relief whose incomes were not stated.

¹ Includes persons on work relief.

² Includes home, office, and clinic calls.

Detailed results have been published, at the date of writing, only for one relatively large city.¹ Comparison of economic status groups is of course not the sole purpose of the survey, but a selection from some of the main findings for this city (Table 5) is sufficient to show that income-difference is an essential part of the problem.

One interpretative point made by officials of the survey² may be added to these citations: "The favourable effect of the local system of emergency medical relief was apparent in the relatively large volume of physicians' services received by the average person in the relief population. However, the higher incidence of chronic illness in the relief group resulted in less care by a physician for the average chronic case than was given in the average case in the non-relief population". And a final comment is well worth repetition: "The surveyed city, in common with most American communities, has no co-ordinated plan for the control of chronic disease. The inertia of the community in the face of this major health problem results from lack of awareness, a situation arising in turn from the paucity of factual information concerning the specific burden of chronic disease".

¹G St J Perrot and D F Holland "Chronic Disease and Gross Impairments in a Northern Industrial Community". *Journal of the American Medical Association*, May 29th, 1937, pp 1876-1886

²*Op. cit.*, p. 1886.

CHAPTER 2

INDICES OF PUBLIC HEALTH

IT is clear from the evidences just considered that the measurement and assessment of health conditions is not a simple matter. Considerable reliance is still placed, however, on certain summary indices as measuring-rods of community health. This is particularly true of mortality rates. Increasing references are being made to morbidity rates but the important fact that these are not available in the same continuous and official form alone prevents them from exercising the same influence on public opinion. Since death rate statistics are the most likely to be used as a background against which sample studies such as those in the present book are viewed, it is an important task to try to bring together the chief factors which affect their interpretation.

Some of these are much more generally taken account of than others. The medical man is particularly aware of the first, namely (1) the influence of epidemic disease upon general mortality statistics. It is well recognized, for example, that an influenza epidemic with its *sequelae* and its effect upon pre-existing pulmonary disease, results in a much higher general death rate. In 107 great towns in England and Wales, during 1929, the general mortality for February and March, two influenza months, was respectively 25.0 and 27.5 per 1,000 of population, while for September, a non-influenza month, of the same year, the rate was only 9.0 per 1,000 of population. The general death rate for England and Wales in 1929 was 14.1 per 1,000 as against 11.7 per 1,000 in the ensuing year of 1930, which year was free from an influenza epidemic. Influenza also affected the Canadian death rate for 1929 (Fig. 2). There have been no major epidemics since that year. It should be pointed out that the caution here suggested is not merely confined to the exaggerated effect which an epidemic gives to the statistics for a particular year. Epidemic diseases strike at and reveal other weaknesses, of diet, physique, etc. The fortuitous absence of epidemic disease, therefore, may mask a lowered standard of

physical fitness which would result in heavy mortality under the impact of a widespread epidemic¹

(2) Secondly, the incidence of death is obviously closely correlated with age. This means not merely that differences in the age-distribution of the population must always be allowed for when comparisons are being made; a fact whose acceptance is attested by the regular practice of "standardization" vital statistics.² It means also that over-all death rates may conceal considerable changes in mortality among certain groups. Thus in the United States, during the first half of 1933, there was an increase of 3.3 per cent in the general death rate as compared with the first half of 1932. An analysis of the figures for the different age groups, however, showed a decline in the rates up to the age of 35, and minor change from 35 to 44; the main increase took place at the ages beyond 45.³ Generally, deaths in the later periods of life are chiefly from degenerative diseases which are essentially a matter of wear and tear and the concomitants of old age. But on the other hand depression has hit heavily the older workers, perhaps more than in hard times in the past.

(3) Similar qualifications should be kept in mind when figures are used which relate to part only of the population, even if the proportion is large. Thus the Statistical Bulletin of the Metropolitan Life Insurance Company for January, 1936, was able to state: "Never before has the health record of the industrial populations of the United States and Canada equalled that of 1935, when the death rate among approximately 17,000,000 industrial policy-holders of the Metropolitan Life Insurance Company was at the lowest point of all time, namely, 8.4 per 1,000. The best previous figure was that for 1934, when a death rate of 8.5 per 1,000 was recorded." There are several points to be considered in interpreting this. It is of some importance that the persons covered by industrial insurance policies, although they are quite widely spread among the various classes of the community, are mostly employed workers. They do not include any large quota of the poorest or the chronically unemployed, and there is some likelihood that among wage-earner families they may be the more careful and thrifty. It does not necessarily

¹ *Health Organization*, League of Nations Quarterly Bulletin, Sept. 1932

² The most conveniently accessible description of "standardization" for Canadian readers is the *Canada Year Book* 1936, pp. 169-170

³ *Health Organization*, League of Nations Quarterly Bulletin, Geneva, Jan. 1933.

follow that these people are more healthy, but there is some presumption in this direction. The informational and other services of the larger insurance companies, by drawing more attention to possible needs for medical treatment, must also have some general influence.

(4) Obviously one of the chief social forces reflected in vital statistics is the progress of medicine and the expansion of health facilities. More precise knowledge of causes, better and more widely extended treatment, campaigns against particular diseases, have helped to produce the underlying trends which appear over very long periods in which the ups and downs of the business cycle can be somewhat discounted. The gains are greatest, however, when economic conditions are favourable. The total death-rate which was 11.5 per thousand in 1926 was down to 9.4 at the lowest point of a steady decline in 1934. Infant mortality especially has been brought down over the same period, the rate for 1934 (72 per thousand for Canada) comparing with an average of 94.5 for the years 1926-29. Tuberculosis has been the subject of active campaigns in many provinces since the War, and the continued decline in deaths from this cause is particularly notable as having continued into the years of the depression.¹

A factor which is similar in its bearing, and not unconnected with the wider matter of medical progress, is the improvement of relief provision. This has not been either universal or uniform; but, more particularly since the inclusion of medical care schemes in some localities, it may well be that some persons on relief are better cared for than before the depression when they had to depend on their own resources from low or irregular wages. This is certainly not a generalization to be applied glibly to the total relief population, but it is a possibility to be kept in mind particularly in studies of cases from private agencies whose standards of care are relatively high, or of some groups of long-unemployed individuals as compared with relative newcomers to the relief offices.²

(5) But an equally major influence, which is least frequently given its proper assessment, is that of "time-lag". The full effects of depression are not always immediately apparent. At its onset, it may not necessarily cause a large increase in deaths. The weakening of resistance against disorders which arise from deficiencies of diet, and other defects related to

¹Cf Fig 11, Chapter 5.

²Cf p. 30.

unemployment, are gradual and accumulative in character. It is not surprising, therefore, that some of the earlier evidence of mortality statistics in relation to economic depression appears to be neutral or negative. There was no increase in the general death rates in England, the United States, Germany and Italy from 1925 to 1932. In 1931, in Germany, Italy, Hungary, Poland, Czechoslovakia and the Netherlands, various observers pointed out that mortality rates were well below the average for the preceding five years.¹ The significant rates for Canada have already been mentioned. But later figures show unmistakably that some important changes in conditions have occurred. Even as late as 1934 the depression was not reflected in statistics of deaths. But now that statistics for its later years and aftermath are appearing, it is clear that progress in health has wavered.

In 1935 and 1936 the general death rate in Canada for both years was 9.7 as compared with the 9.4 and 9.6 of the two previous years. In Quebec Province, including Montreal, 1936 registered an appreciable fall in the rate, but the figures for 1933-35 together show that the general steady decline was arrested. (See Fig. 2.)² In these circumstances, current figures demand more than usual attention; and those most recently available are not reassuring. The death rate in Quebec for the first half of 1937 was 11.3 as against 10.7 per 1,000 in the corresponding six months of 1936. In the first quarter of 1937 the mortality rate in the Dominion as a whole was 11.5. This compares with 10.4 for the equivalent month in 1936, and a considerable part of the increase is attributable to influenza, but this raises the question as to whether inadequate nutrition is now a factor. In 1935 a slight increase in infant mortality was recorded though it was followed by a decrease again in 1936. But the Montreal figures for the first three-quarters of 1937 show a disconcerting jump, from 82.0 to 95.9. The increase in Canada (first quarter of the year only) was from 69 to 87. Tuberculosis, like infant mortality, is more closely related to economic conditions than the general death rate, and here again increases have supervened on the former encouragingly rapid decline; they were notable particularly in 1936. Figures for Montreal in 1937 are not very different from those for

¹(a) *Health Organization*, League of Nations Quarterly Bulletin (Geneva), September 1932. (b) Tyszká: "Living Conditions, Nutrition and Health of the Unemployed". *Munchener Medizinische Wochenschrift*, Vol. 79 (Dec. 1932).

²p. 24.

1936. But a heavy increase is recorded in Quebec outside of Montreal.¹

So far as health is concerned, therefore, the full story of the depression is probably still far from told. Past history would

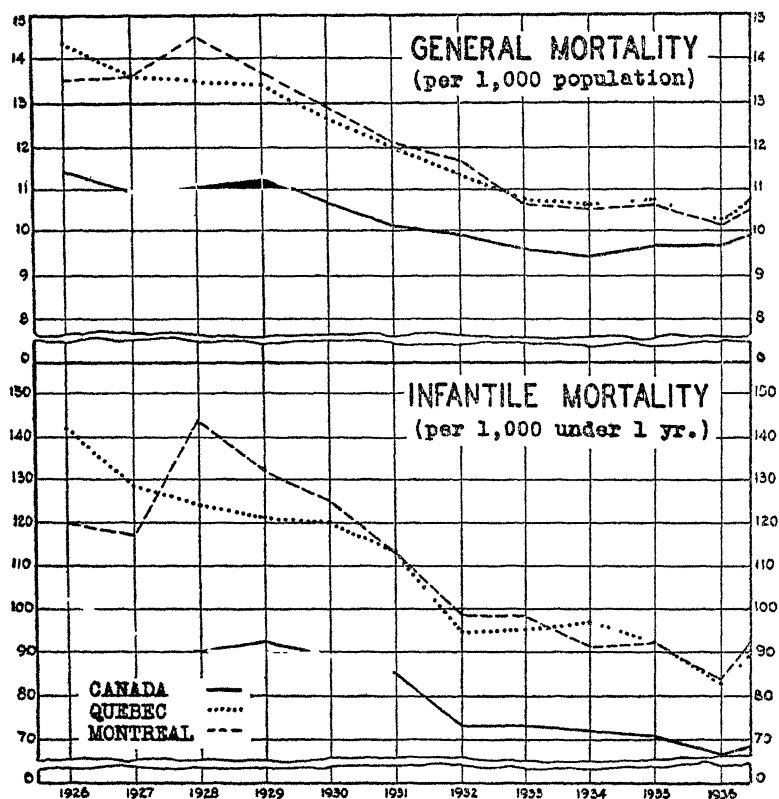


Fig. 2 General mortality rates and infantile mortality rates for Canada, Quebec Province, and Montreal City, 1926-36.

establish the lesson clearly if it were sufficiently well documented. Unfortunately, generalizations based on a series of trade cycle measurements are more difficult to formulate than they may at first appear. It has been pointed out by students of the subject that earlier depression periods, i.e., 1875-79, 1884-86, and 1914-15, have been years with sub-normal

¹For sources of figures, including those on which Fig. 2 is based, see Table I of Appendix.

mortality rates. And a fairly short sequence between the course of business activity and the fall and rise of death rates has been established for the United States before the War.¹ It is quite possible that to-day the effects may be longer delayed. On the one hand public health measures are better. But on the other hand the consequences of unemployment and depression have been wider, and their accumulation persists into more prosperous periods. An increased amount of sickness during "bad times" may lead to higher death rates a sufficient number of years ahead for these to appear during recovery-phases of the trade cycle. Similarly, lower death-rates which continue to be recorded in the depression period are in part the product of better standards of living which were achieved during the years of prosperity before the depression. In such studies of the relation between vital statistics and the state of trade as have been made, explanations which run on these lines are more convincing than those which accept a correlation too literally, without allowing for forces operative during the time-lag.²

It is interesting to add that in the earlier years of the depression some experienced observers noted higher mortality rates among the lower-wage classes in the United States, and anticipated from this that an increased general mortality might be expected to follow.³ Increases in the general mortality rate were in fact recorded in 1934, 1935 and 1936. Thus 1933 which was the worst year of the depression was the year in which the lowest death rate was recorded.⁴

GENERAL MORTALITY RATES, U S A , 1928-1936

Year	Rate	Year	Rate	Year	Rate
1928	12.1	1931	11.1	1934	11.0
1929	11.9	1932	10.9	1935	10.9
1930	11.3	1933	10.7	1936	11.5

The latter was obviously part of the continuous trend in operation from 1928 on. Infant mortality, similarly, which

¹W. F. Ogburn and D. S. Thomas "The Influence of the Business Cycle on Certain Social Conditions", *Journal of American Statistical Association*, September, 1932.

²Britten: *Trends of Health in U S A*, U S Public Health Reports, Vol. 28 (Jan 1933).

³Vital Statistics: Special Reports (figure for 1936 provisional), May 10th, 1937.

⁴Vital Statistics, Special Reports, June 14th, 1937 (U S. Department of Commerce, Bureau of the Census, Washington).

fell from 68.7 per thousand in 1928 to 57.6 in 1932 rose to 58.1 and 60.1 in 1933 and 1934. The downward pull was reasserted in 1935, for which year the rate was 55.7; but the provisional figure for 1936 is 56.9.¹

(6) The objection of greatest weight against reliance only on mortality rates, which sums up many of the other qualifications, is that they do not indicate the extent of illness in general and the many contributory causes thereto. Thus they fail to show the many systemic disorders, mental and physical, which do not necessarily progress to a lethal termination, but which may destroy happiness and efficiency. A life-long sufferer from gastric distress, for example, which causes great personal discomfort and makes for inefficiency, may succumb to an accident, or to pneumonia or some other intercurrent disease. The mortality record shows nothing of his gastric condition. Similarly, other disorders, such as hernia, dental and optical needs, may not be measured at all. It is only when dysfunction is terminated by death that mortality rates show "health conditions". Malnutrition and related health standards are of even wider concern, yet retrogression here may continue for many years without perceptible effect on general mortality.

Perrott and Collins, writing from a wide experience of morbidity studies, some of which have been cited in the preceding chapter, are able to put the point thus firmly: ". . . the important causes of death are *not* the most frequent causes of illness. The number of illnesses severe enough to be remembered and reported, even in relatively infrequent canvasses of households, is 75 to 100 times the number of deaths. For digestive, respiratory, eye, ear, and skin affections and the common communicable diseases of childhood, the disparity between sickness and deaths is even greater. In depending upon deaths to indicate trends in health we are relying on a small and probably biased sample of the cases of illness".²

The relevance of this to the depression is that "reserves" of ill-health may have been built up in recent years in spite of the downward tendencies shown in mortality and other indices.

¹ Cf. on this point Dorothy Thomas's *Social Aspects of the Business Cycle* (London, G. Routledge and Sons Ltd, New York, E. P. Dutton and Co, 1925), which supports the above argument, with M. B. Hexter *Social Consequences of Business Cycles* (New York, 1925, Boston, 1925, Pollak Publications).

² G. St. J. Perrott and S. D. Collins, *U.S. Public Health Reports*, May 3, 1935 (Health and Depression Studies No. 1).

An optimistic deduction should not be drawn too easily in the face of the day-to-day evidence of destitution, demoralization and sickness which is to be found connected with unemployment, and of the fact that unemployment continues to be heavy in spite of signs of business recovery in other directions. In studying the results of economic depression, this is particularly important, because unemployment is correlated with sickness much more generally than with death (unless suicides are included). Particularly is this true when the family and not merely the individual is taken into account. In general, sickness surveys and comprehensive medical examinations will serve to determine the state of health of the community or of particular groups much more accurately than mortality statistics alone. The best method of gauging the state of the public health is continuous recourse to both of them. Health surveys are not less necessary when basic indices are moving favourably. they may be more revealing than usual, in indicating where progress still remains to be made. When mortality-rates show actual increases, examination of the distribution of sickness, disease, nutrition, and medical facilities becomes imperative.

CHAPTER 3

UNEMPLOYMENT AND NUTRITION

FOR THE population subject to unemployment, even morbidity and mortality measurements together may not reflect the full effects of depression. The economic consequences of unemployment are food restrictions, inadequate housing, over-crowding, insufficient clothing, and exposure. The contribution of these elements may differ as between e g , single men and families, but all of them undermine general health and weaken resistance to disease. Nutrition and diet are outstanding, but the least easy of the health demands of the body to assess. It is often argued that an unemployed man needs less food, and it is true that these needs are considerably reduced in the physically inactive person as opposed to the employed worker. But this is very far from disposing of the matter. Firstly, whatever may apply to the unemployed breadwinner does not apply to his family, whose needs will remain much the same. In practice, various "margins" in the budget are often squeezed to lessen deprivations for the children. But even this is not always successful, and it may be expected that because of their relatively more active lives and their needs for growth, children will be the first to show direct evidence of deterioration in health due to inadequacy of food in the home. Secondly, food economies lead commonly to over-reliance on starches and sugars at the expense of fruits, vegetables, and other items in the balanced diet. Relief meals, even if they are "ample", may be stodgy and monotonous, and ill conducive to energy. Diet deficiencies may produce general sluggishness even without evidence of positive malnutrition. This applies more particularly, perhaps, to adults. Finally, both the qualitative and quantitative adequacy of nutrition need special consideration in the case of the individual who passes from relief to employment, or who is intermittently unemployed. Is "low level" maintenance satisfactory, or should not an unemployed worker be able to build up a reserve if his first new work is not to tax his endurance too heavily?

Far more attention has been paid to children than to adults in investigating these matters. Though even here the trends

are not always clear and may easily be neutralized or concealed by variable elements in the totals. A New York health centre reported as early as 1932, to the effect that undernourished children had increased from 18 to 60 per cent. since 1928. It was further stated that in some areas where unemployment is heavy, both infant mortality and tuberculosis mortality have been increasing and that the sickness rate among the unemployed appears to be higher than among other groups¹. Yet a nutritional survey made of 4,500 children of families on relief in the United States in 1934 reported: "The relief programme, prior to March 1, 1934, was adequate as far as the nutritional status of the children measured by a length-width index is concerned". A similar statement, made in 1936 by Dr J. S. McLester, is that "in the present-day depression, the nutritive state of the American school child has not suffered."²

It is clear from this that a close definition of the socio-economic background of particular groups examined is very necessary, though lack of standards is also part of the difficulty. Hagerstown, Maryland (which, as already cited, has been selected by the U.S. Public Health Service as a typical small urban community), was the locale of one enquiry intended to fill part of this gap, and this study has been followed up during the depression years.³ Over the period 1921 to 1928 only a relatively small variation was found in the average weights of children at different ages between 7 and 15, though the yearly increments registered were shown to be clearly greater in some years (in this case during 1924-28) than in others. In 1933 the weights of the majority of the children in the first six grades of school (aged 6 to 11) were secured. Comparison of these results as a total with those of the eight year period show what at first sight may seem a remarkable lack of divergence. Differences in the percentages of children underweight (12 per cent. or more below the 1921-27 averages)

¹ (a) *Health Organization*, League of Nations Quarterly Bulletin, Geneva, Sept 1932. (b) E. Sydenstricker *et al.*, "District Health Administration in New York City", Milbank Memorial Fund Quarterly Bulletin, July 1933. (c) C. V. Kisev and R. K. Stix, "Nutrition and the Depression", Milbank Memorial Fund Quarterly Bulletin, October 1933.

² (a) Geiger and Barrett, *American Journal of Public Health*, Feb 1935, McLester, *Journal of the American Medical Association*, May 30th, 1936.

³ C. E. Palmer, "Variations in Growth in Weight of Elementary School Children, 1921-28", "Growth and the Economic Depression", "Further Studies on Growth and the Economic Depression". From *U.S. Public Health Reports*, issues of Aug. 18th, 1923, Oct. 20th, 1933, and Dec. 7th, 1934, respectively.

were also not conspicuous on this basis (except for the younger girls aged from 6 to 9). When the children were grouped by reference to the employment status of the family at the time of the enquiry, however, the weights of the children whose parents were regularly employed were revealed as from 15 to 4 pounds heavier at all ages, than the children of either the unemployed or the partially employed. The most clearly marked divergence appears when the children are regrouped into those receiving welfare aid and others, the consistently inferior showing of the former being in this case from 2.5 to 9 pounds on the average.

Even from this evidence it is arguable that similar differentiation might lend more significance to changes over time which at first sight appear to be negligible. Over-all average weights, moreover, are an elusive measurement, and comparisons between points of time do not necessarily tell the full story.¹ It is the strong suggestion of the studies presented in Part IV that differences between income or economic-status groups should be examined before the trends of such figures are interpreted too widely.

In terms of *change* in economic status, the situation has been most illuminatingly analyzed in the second of the U.S. "Health and Depression" studies.² The children of some 5,000 urban working-class families were classified in this survey into three groups (a) those whose status remained comfortable (above \$250 per person in the family) from 1929 to 1933, (b) those who remained poor (below \$250 per capita) throughout, and (c) those whose income fell from comfortable to poor levels. For these children an index of average weights between the ages of 6 to 9 was compiled. The trends shown by it over the period from 1928-29 to 1932-3 are unmistakable. It remained almost constant for the first class, at some 4 per cent. above the average. Weights rose slightly in the second class,³ though throughout the period they were from 1 to 2 per cent. less than the average. Among the third group, the children of the "depression poor", weights fell markedly in 1930 to levels comparable with those of the chronically poor.

¹On the cautions which apply on medical grounds against judging nutrition from simple indices, cf Chapter 5.

²C. E. Palmer "Height and Weight of Children of the Depression Poor". *Public Health Reports*, Aug 16, 1935. This article also contains some further references on the conflicting reports on children's nutrition in 1933.

³Cf. pp. 153, 215, etc.

Nutritional examinations of adults are rare, but an increasing body of facts is being accumulated on food consumption and its significance. Differences in local prices and food staples considerably complicate this kind of enquiry, but certain generalizations with regard to dietary adequacy as a function of income-variation are now well established. In the United States, the third of the "Health and Depression Studies", covering a diverse set of communities, found that in many of them the average energy value of the food supply among non-income families was a serious percentage below adequate standards (set by the Bureau of Home Economics of the U. S. Department of Agriculture at 3,000 calories per day for the moderately active adult male). In the larger cities, 25 to 30 per cent. of the relief families were living on less than 2,200 calories per adult unit, though some of the poorest groups who were not on relief revealed the worst conditions. "A greatly diminished use of milk, vegetables, and fruits was associated with lower incomes in all the communities in the study". And these deficiencies were associated with a similarly marked correlation between incomes and the amount of sickness.

A study of the actual types of diet followed by different income classes (drawn from two groups of families, employed and unemployed) has recently been made in Cambridge, Massachusetts.¹ Using the detail of actual budgets in terms of ten food groups, the shortage of milk, vegetables and other "protective" foods at the lowest income-levels and the consistent increase in calorie contents as income rises are well confirmed. In Great Britain, Sir John Orr has made investigations of a related type but on a national scale, and has approached the problem from the criterion not of minimum but of optimum requirements.² His results stress "the inadequacy of the diets of the lower income groups, and the markedly lower standard of health of the people, and especially of the children in these groups, compared with that of the higher income groups" to an extent which cannot be better summarized than by his estimate that a diet and level of consumption "completely adequate for health, according to modern standards" is reached by only 50 per cent. of the people of the United Kingdom. It is not surprising therefore

¹Helen L. Sorenson and Elizabeth W. Gilboy. "The Economics of Low-Income Diets" *Quarterly Journal of Economics*, August, 1937.

²J. B. Orr. *Food, Health and Income* (Macmillan, London, 1936).

that a recent international enquiry into the problems of nutrition undertaken by the I.L.O. related the subject not to the unemployed alone but to the whole working population.¹

The need for comprehensive and pertinent information on nutritive conditions in Canada is made very clear by the chief official document available to date, a report of the Subcommittee on Nutrition prepared for the British Commonwealth Scientific Conference in August 1936.² The minimum food standards approved for relief budgets by the Ontario Medical Association are reproduced herein and compared with the "London" standard of the League of Nations³, but the report includes no data of actual relief budgets throughout the country, or of investigations made among relief or low-income groups themselves. The favourable conclusions of this report, which are commented on in a later chapter, are somewhat surprising. For there is no *a priori* reason for believing that the socio-economic variation in nutritive conditions is essentially different in the Dominion from that measured in the United States. The following tables extracted from the Canadian report relate only to the consumption of one important commodity, milk, but show the most marked correlation with income. Farmers' families as a group are naturally a special case, but when these are reallocated with others according to income, the correlation is complete. From the same sample it was found that the proportions of children in the five income groups specified in Table 6 who were not getting milk as a regular drink were 6, 10, 18, 28 and 33 per cent. respectively. It is significant to add also that the minimum (relief) standard recommended by the Ontario Medical Association calls for the consumption, in an average family, of from 0.7 to 0.9 pints per head per day.

The evidences of inadequate nutrition among the unemployed which are considered in succeeding pages are only a few samples drawn from both the earlier and the later years of the depression period, but many relief agencies are confident they would be multiplied if a wider survey were under-

¹ *Workers' Nutrition and Social Policy*, Studies and Reports, Series B, No. 23, International Labour Office, Geneva, 1936.

² *National Health Review*, Ottawa, Vol. 4, No. 15, pp 58-94, October 1936.

³ A Technical Commission, on the Physiological Bases of Nutrition, was appointed by the Health Committee of the League and met in London in 1935. Its report is given in full in League of Nations Publication, Economic and Financial Section, II.B4, 1936; and summarized in *Workers' Nutrition and Social Policy*, pp 183-5.

taken. What needs to be emphasized at this stage in our measurements, or lack of them, is that nutrition must necessarily be interpreted broadly. Firstly, poor nutrition can be a handicap to health and employability long before it is revealed by the onset of specific deficiency diseases. A relationship at these less chronic levels between nutrition and sickness, due to lowered vitality and resistance, has been

TABLE 6 MILK CONSUMPTION IN RELATION TO
OCCUPATION AND INCOME IN CANADA (1935)

Group	Number of families	Per capita daily consumption	
		All uses	As beverage
<i>Occupational Status</i>		(<i>pints</i>)	(<i>pints</i>)
Professional	315	0 82	0 55
Large business executive	268	0 82	0 50
Small business executive	157	0 75	0 48
Salesman	191	0 74	0 49
Clerical work	308	0 75	0 49
Skilled labour	855	0 68	0 41
Unskilled labour	484	0 57	0 33
Farmer	333	1 04	0 67
<i>Family Income</i>			
\$4,000 and over	151	0 95	0 63
\$2,000-\$4,000	544	0 81	0 50
\$1,000-\$2,000	1,060	0 76	0 47
Under \$2,000	1,263	0 69	0 43
On relief	189	0 54	0 31
Total *	3,213	0 59	0 35

Data collected by Department of Agriculture, Ottawa, from Quebec, Ontario, and Alberta.

*The first part of the classification excludes 302 families of occupational status "retired", or not stated, the second part excludes 6 families whose income was not stated

accepted in many of the studies which have been quoted. A heavier burden of sickness in the future may be the consequence, even if it does not appear in the records of the moment. Further, minimum budgets which are completely adequate by scientific criteria must also face the facts of their use in practice. More and more the importance of an "extra margin" is being recognized, to take care not only of errors and wastes, but of emergencies and special cases, to permit variety, to avoid the encroachment upon the other items on the budget (which may affect health) to find the money for these expenditures. Finally, it is not a problem of the relief

population only. For most of these, in any case, re-employment and the heavier physical demands attendant upon this change of status must be considered. But the restrictions of low income also apply to many employed groups.

PART II
ADULT WORKERS

CHAPTER 4

THE ADULT SAMPLE EXAMINED

WHEN THE first study, of employed men as individuals, was organized, no way of undertaking this was open, other than through private agencies which were distributing relief or offering some other service to jobless men. Arrangements to undertake medical examinations of some of the registrants were made with four of the chief institutions in Montreal; namely, the Bureau for Office Workers, the Protestant Employment Bureau, the Vitre St. Refuge, and the Day Shelter for Unemployed Men. Each of these had its special characteristics. The Protestant Employment Bureau beside being a placement agency was also the chief centre for family relief distributed by certain co-operating Protestant agencies through an Emergency Unemployment Relief Committee. The Office Workers' Bureau performed a similar function for white-collar workers but its services were open to single as well as married men, and unrestricted as to religious or racial group. The great bulk of its registrants were English-speaking, however. The Day Shelter and the Vitre St. Refuge (the latter of which provided meals and beds) were open to all comers, but in practice housed the single and homeless men whose numbers in the city swelled enormously during the winters of 1932-5.¹ Although homogeneous in one respect, that of being largely unskilled workers, these men were the most diverse in other respects, including a large proportion of Central European stocks as well as French-Canadians and British-born immigrants.

Eleven thousand or more men were registered at these institutions. The number of male wage earners in the city who had been unemployed for serious periods at the time the studies were made was nearer three times this amount. The greatest proportion of these were French-Canadians, whose relief was organized until the end of 1933 through the

¹Eleven per cent of the men examined from the Vitre St. refuges were French-Canadian, 7 per cent of those from the Protestant Employment Bureau, and 2 per cent from the Office Workers' Bureau. The proportion of French-Canadians among all unemployed wage earners on relief is nearer 66 per cent.

parish units of the St. Vincent de Paul Society, and this is by far the most important gap which must be borne in mind in considering the results presented herein. A qualification of less importance in this context is that a considerable proportion of unemployed men are not touched through relief agencies in so far as they are supported by their families, or credit on their own savings, etc. Native-born Canadians in particular are probably fewer in the sample because of this fact.

It was impossible, with the resources available, to examine all the unemployed men thus comprised. To do this would, in the first place, have entailed a certain amount of compulsion, and the friction which might have developed would have defeated the purposes in view. A sampling based on economic status was therefore followed, an effort being made to secure a sufficiently representative group in each of three main occupational classes. (a) clerical and white-collar workers; (b) skilled and semi-skilled workers; and (c) low-skilled workers and labourers.¹

In addition to office workers, those registered at the first bureau named above included salesmen, commercial travellers and some professional workers. The registrants at the Protestant Employment Bureau were largely skilled and semi-skilled factory and shop workers. Those at Vitre Street Refuge and the Day Shelter were low-skilled: longshoremen, seamen, pick-and-shovel men, general labourers. However, some overlapping was inevitable as no bureau registered one type of workers exclusively; the material secured in the study was therefore rearranged, so that the final classification is by occupational classes and not by agencies. The objective was set at one thousand adults, and in all 1,003 individuals were

¹Both the nature of Montreal's population, and the diverse organization of unemployment relief (at least prior to 1935), add to the difficulty of securing an inclusive sample of unemployment data. Social agencies in the city are divided not only on a religious basis, but also by language, so that the private care of dependency is distributed among four units: Protestant (predominantly English-speaking), English-speaking Catholic, French Catholic, and Jewish. "Protestant" is not synonymous with "British" in the racial connotation of this term, and Protestant relief agencies during the depression have had persons and families of varied racial origin on their rolls. While "English" Catholics include, similarly, many other than Irish, there are still various agencies covering a number of minority racial groups, some of them Catholic, in the city. In the main the groups whose health conditions were measured were drawn from the English-speaking sections. While they are representative for the larger part of Canada in this respect, it is unfortunate that a larger coverage of French-Canadians was not possible.

examined On the basis of occupation and skill they were divided into three groups as follows.

Status	No	Per cent
A White-Collar	222	22
B Skilled and Semi-Skilled	343	34
C Low-Skilled and Labourers	438	44
Total	1,003	100

These proportions, as might be expected, accord more closely with the occupational structure of the English-speaking population of Montreal than of the French. An assessment of the results in the light of general experience suggests that the white-collar group and unskilled workers are both well represented; but the range of artisans and factory workers in group B is somewhat restricted.

The total number of unemployed did not fluctuate materially during the period over which the medical examinations were made, but changes did occur in the number unemployed in particular occupational groups. The exact ratio of the number examined to the total unemployed in each category cannot be stated with complete accuracy. Broadly, however, 20 per cent. of the total office workers, 8 per cent. of the artisans and 12 per cent. of the low-skilled groups were covered. If anything, the clerical and white-collar cases have a slightly excessive influence on the total sample. So far as medical standards are concerned, it is believed that the study did not secure the sick to the exclusion of the healthy, nor vice versa; the balance in this respect is representative, at least of the group measured.

The circumstances under which the study was conducted allowed for the work to be done unhurriedly by one individual. While this extended the duration of the survey, a definite advantage secured was that of uniformity in the interpretation of physical findings and other relevant data. On an average, ten men were examined daily, at either a morning or an afternoon session, approximately twenty minutes being spent with each man. Diagnoses were based on a complete medical history and physical examination. Urinalyses were made for over 90 per cent. of those examined. Where disease of the lung was suspected, an X-ray examination was made. Serological tests were not a routine. Laboratory examinations

were carried out and the assistance of special clinics was secured where a diagnosis was questionable or where confirmation of a diagnosis was sought

Early in the study it was agreed that the greatest measure of success would be achieved if the men submitted themselves voluntarily, it being understood that the examination could not promise a clinical service. Treatment facilities were not available, and no treatment was offered, except for serious cases which came to light

At first, examinations were somewhat delayed owing to the misunderstandings and prejudices natural in men long unemployed and dependent. Time was devoted to overcoming these attitudes by careful explanation of the real object in view. At one centre, a First Aid Clinic was conducted for minor ailments, and this proved to be most helpful in the study because the medical examinations took on a different shade of meaning in the mind of the average applicant for examination. Some men came because they were "healthy", hoping to delude the examiner. However, many of these were found to be suffering from defects or disorders of not inconsiderable importance. A smaller number shunned a medical examination for fear of being reminded of a physical handicap, of which they were fully aware and for which corrective treatment, which they did not wish to undergo, might be suggested.

For many of the groups, tests of general intelligence, clerical ability, industrial aptitude, etc., were being made during the same years,¹ and it was hoped to have the men who had taken these psychological tests return for physical examinations, but this did not prove possible. The majority were unwilling to have any additional tests made, while a fair proportion had moved to a new address, in or outside the city, or had secured work in the interval between examinations.

GENERAL CHARACTERISTICS OF THE GROUPS

More than half of the industrial workers, but only 3 per cent. of the white-collar men, were Canadian-born. This is not unduly divergent from the average, for in Montreal there are a considerable number of British-born artisans and an even more marked proportion among clerical workers.

¹The results of this work are published in *Occupational Abilities. A Study of Unemployed Men* (McGill Social Research Series, No. 3. Oxford University Press, 1936).

The low-skilled group, including loggers, building labourers, longshoremen, Lake boat crew men, and similar workers, was characterized by three features. First, it includes a quota of French-Canadians, many of them from outside Montreal. Secondly, twenty-five per cent of this group were Continental Europeans. This is large compared with the 7 and 8 per cent. in the two other occupational groups, but none the less typical, especially in view of the fact that the first incidence of the depression was particularly heavy on foreign immigrant labour. Poles, Russians and other Slavs are the largest element in this sample while—again typically—Germans and Dutch, etc. are represented in the white-collar and artisan groups. Thirdly, 23 per cent of the unskilled group were British-born. This is considerably lower than the corresponding figures in the higher-status groups, but actually somewhat above the normal average,¹ and in fact due to the presence at the Day Shelter of a large number of young British immigrants who had come to Canada, many of them to Ontario farms, only a few years before the depression struck. Important though they were as elements in the depression relief population, their influence on the results is probably atypical. In general, it is important to remember that only one-sixth of the white-collar and industrial groups examined were Montreal-born men, and only one-tenth of the unskilled

TABLE 7 BIRTHPLACES OF THE ADULT SAMPLE GROUPS

Born	White-Collar		Skilled and Factory		Low-Skilled	
Montreal	38	17.1	59	17.2	45	10.3
Elsewhere in Quebec	16	7.2	64	18.6	96	21.9
Elsewhere in Canada	41	18.5	58	16.9	59	13.5
Canadian-born	95	42.8	181	52.7	200	45.7
British Isles	94	42.3	125	36.3	102	23.3
Continental Europe						
German, Scandinavian	13	5.9	14	4.1	17	3.8
"Slavic" countries	1	0.4	10	2.8	85	19.4
"Latin" countries	1	0.4	3	0.9	7	1.6
Other British Countries	11	5.0	6	1.7	7	1.6
All Others	7	3.2	4	1.0	20	4.6
Total	222	100	343	100	438	100

¹On the composition of the Montreal labour force by racial and nativity groups, see *The British Immigrant* (McGill Social Research Series, No. 2. Oxford University Press), especially Chapters VII and VIII.

group. This does not mean of course that most of them were not residents of the city: the major proportion of them were domiciled in Montreal and many had worked here for long periods.

AGE AND MARITAL STATUS

The white-collar workers taken as a whole were slightly older, and the unskilled workers slightly younger, than the average. But the differences are not large, and are easily

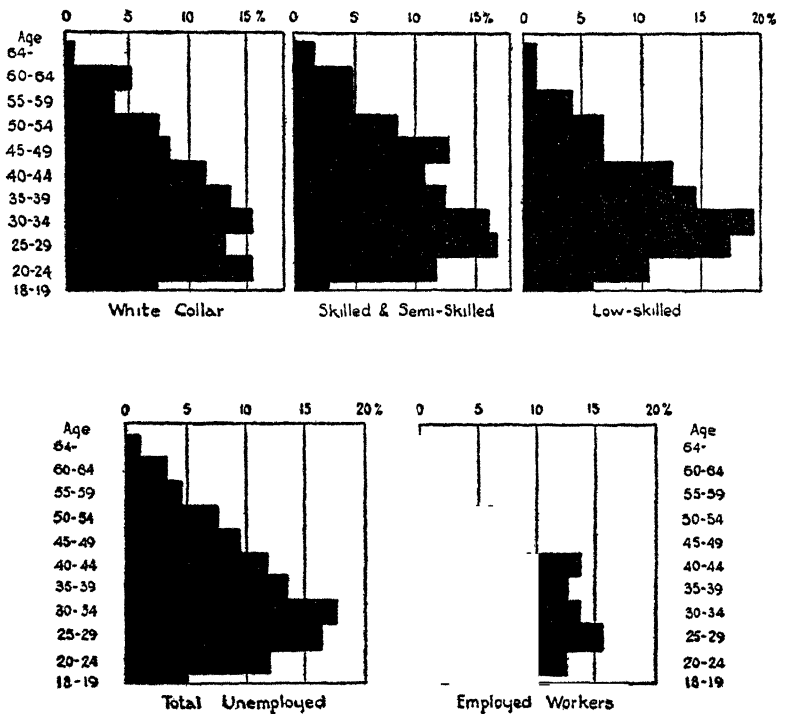


Fig. 3. Age distribution of the sample groups of unemployed and employed men

assessed in considering the medical findings. The relatively large proportion of junior clerks, office boys, etc. in the census total of clerical occupations accounts for the first. There was less tendency for these young workers than for some of the older men to lose their jobs in the depression. The fact that a number of young transients were in the Day Shelter helps to explain the second. Some of these were farm workers or

construction labourers, others were classified as unskilled since they had no trade.

The small table below shows the median ages of all wage-earners in Montreal City, and of all those in the total who reported some unemployment during the year 1930-31 calculated from the census materials of 1931 and using comparable definitions to those applicable to the medical survey. It will be seen from this that the averages are very close, most of all in the case of the skilled and semi-skilled group.

TABLE 8 COMPARATIVE MEDIAN AGES OF MALE WAGE EARNERS,
MONTREAL CITY

Group	White-Collar	Industrial	Low-Skilled	Total
All wage earners	31 7	36 5	34 5	35 2
Unemployed some period during 1930-31	30 8	37 0	34 5	35 3
Sample Group	34	37	33	35

TABLE 9 AGE-DISTRIBUTION OF THE ADULT SAMPLE GROUPS

Age	White-Collar	Industrial	Low-Skilled	Total
18-19	7 2	2 3	5 9	5 0
20-24	15 3	11 4	10 5	11 9
25-29	13 0	16 5	17 4	16 1
30-39	28 8	27 7	34 0	30 6
40-49	19 4	23 0	19 4	20 7
50 and over	16 3	19 1	12 7	15 7
Total	100 0	100 0	100 0	100 0

It is important to note certain features of the age-distribution, however. A relatively large proportion of the white-collar workers (22.5 per cent.) were under 25, while a larger proportion (nearly seventy per cent.) of the industrial workers were in the forties and fifties. The low-skilled sample has, quite typically, modal groups of both young and old workers. (Cf. Fig. 3.)

For adult men in the Dominion as a whole the proportion of single men to those who are married, widowed or divorced is about 59 : 41, or roughly three out of five. The sample group accords closely with this normal ratio, but with noticeable differences between the three divisions. The proportion of men with families is higher than this in both the white-collar

and the industrial group, and much lower among the unskilled workers. In part this is a reflection of the separation between family relief and single persons' relief, which has been general throughout Canada, the two employment bureaus were

TABLE 10 CONJUGAL STATUS OF THE SAMPLE GROUPS

Status	White-Collar		Industrial		Low-Skilled		Total	
Single	122	55 0	174	50 8	307	70 1	603	60 2
Married	79	35 6	131	38 1	111	25 3	321	32 0
Widowed	15	6 7	24	7 0	16	3 7	55	5 4
Divorced	6	2 7	14	4 1	4	0 9	24	2 4
Total	222	100 0	343	100 0	438	100 0	1,003	100 0

functioning in large part, though not solely, as registration centres for married men, while the refugees were primarily for single men. Subsequent information revealed that many of the men who stated themselves as single were in fact married and separated from their wives. In all the groups, it may be noted, the proportion both of widowed and divorced men is exceptionally high.

AMOUNT OF UNEMPLOYMENT

The average period for which the group as a whole had been out of work was 14.3 months, but this is a combination of a lower figure for the white-collar workers—11.9 months or just under a year—and higher figures for the industrial and unskilled men, 17.4 and 18.2 months respectively. These

TABLE 11 AMOUNT OF UNEMPLOYMENT EXPERIENCED BY THE SAMPLE ADULT GROUPS

Period	White-Collar		Industrial		Low-Skilled		Total	
	No	P C	No	P C	No	P C	No	P C
Under 3 months	20	9 0	21	6 1	34	7 8	75	7 5
3-7 months	55	24 8	61	17 8	62	14 1	178	17 7
8-12	69	31 1	75	21 9	84	19 2	228	22 7
13-17	31	14 0	47	13 7	27	6 2	105	10 5
18-22	18	8 1	26	7 6	41	9 4	85	8 5
23-27	17	7 6	65	18 9	123	28 1	205	20 4
28-32	5	2 3	14	4 1	12	2 7	31	3 1
33-36	7	3 1	24	7 0	36	8 2	67	6 7
Over 3 years	0	0 0	10	2 9	19	4 3	29	2 9
Total	222	100 0	343	100 0	438	100 0	1,003	100 0

periods are long enough to have had distinct influences on health, but considering that the examinations were made at the worst point of the depression they are not abnormally high. Only a very few had been without work for over three years. Closer examination of the data (Fig. 4) shows that

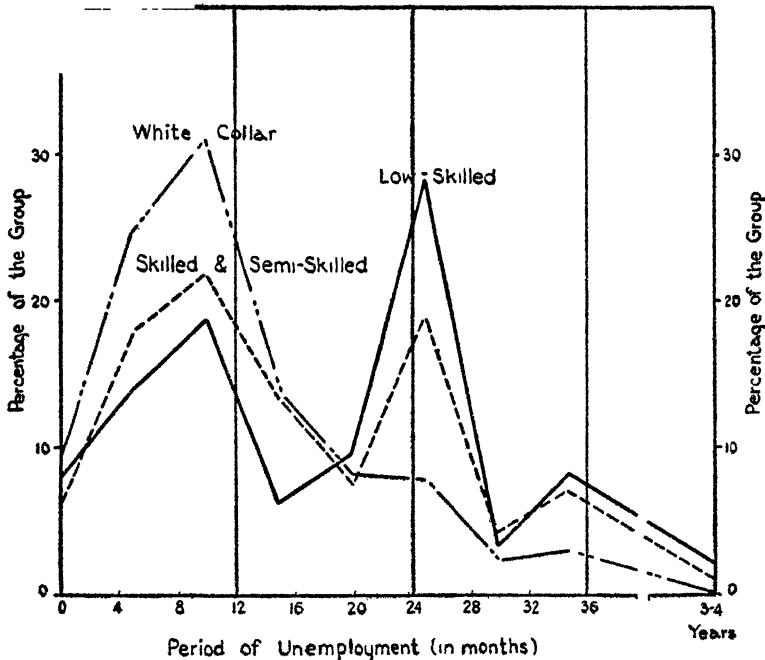


Fig 4 Distribution of periods of unemployment experienced by the men examined

whereas the white-collar workers record a typical period of unemployment of about a year, the other workers each include a large group of men who had been out of work for two years or more. This may be partially explained by the tendency of many of the men to give a rough estimate of their term of unemployment, but it is also a measure of the influence of difference in status. Lay-offs were made sooner and more generally among industrial workers than on office staffs. Although not shown by the figures, the longest periods of unemployment were suffered by the older men in the unskilled category.

EMPLOYED INDUSTRIAL WORKERS' A COMPARATIVE GROUP

No medical records are available for the Montreal population as a whole of sufficient comprehensiveness to form a general "control" against which to measure the findings for the unemployed group. Certain other work in which the McGill Department of Public Health and Preventive Medicine was engaged¹ offered at least a partial comparative group of employed workers, however. This is a medical survey of the employees of four staple industries in Montreal—textiles, tobacco, flour, and electrical supplies—covering in all 1,107 men, mainly of industrial grade but including a few clerical workers.

Although the examination of this employed group was intended primarily as part of a tuberculosis survey, the present study followed the same general type of medical examination, the medical questionnaire was along similar lines, and an endeavour was made to use the same terminology throughout. The fact that the two surveys were made by different physicians might, not unreasonably, involve some lack of agreement with regard to the values placed upon certain defects and disorders. This is inevitable and is mentioned here only to show an appreciation of the margin to be considered in comparing the results.

Although the findings for the industrial workers' group are specifically mentioned and compared with the present survey throughout, the results of other investigations are used wherever a correlation is possible or where some other reasonable basis for comparison exists. The notes and diagrams which follow provide further tests of the serviceability of the comparisons.

The employed workers are closest to the skilled and semi-skilled group of the unemployed in point of age, but their greater concentration between the ages of 20 and 45 is noticeable. (Cf. Fig. 3.) The industrial (unemployed) group has a prominent number of men in the later forties and fifties in its ranks. The white-collar group is somewhat younger on the average, but has in other respects much the same age-distribution. The low-skilled group, in spite of its pronounced "25-35" mode, is more comparable in age with the employed men than might have been expected.

¹In co-operation with representatives of the Canadian Tuberculosis Association and the then Provincial Bureau of Health (now Ministry of Health).

A much larger proportion of the industrial employees were married. To a small extent this measurement for the control group is subject to correction, since a few of the records for these men did not give marital status, while a few others who were widowed or divorced may have simply

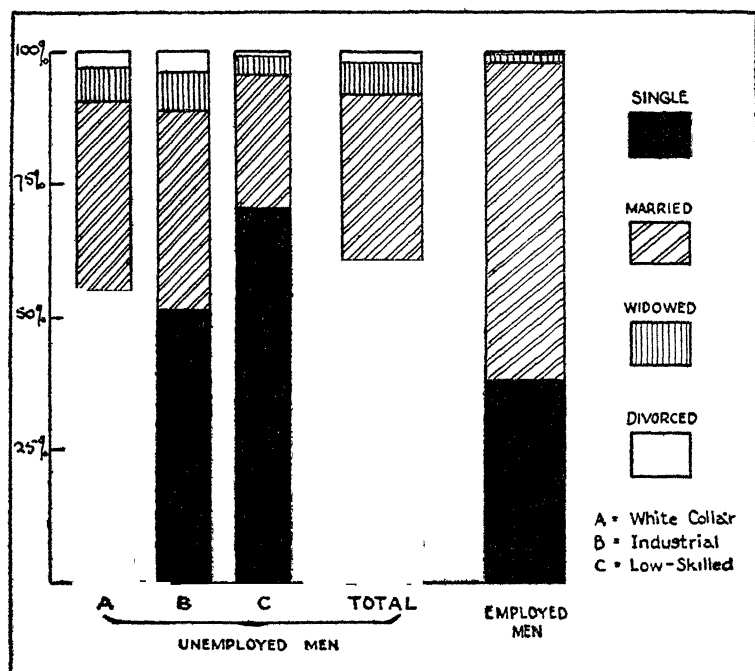


Fig 5 Conjugal status of the sample groups of unemployed and employed men

stated themselves to be married. On the other hand there is some evidence that married men are preferred in the selection of factory employees: the fact that the proportion of married and single men in the two groups as a whole are practically reversed is to this extent nearer normal expectation than it might at first seem. None the less, the difference should be borne in mind in considering the medical data. This is particularly relevant, of course, for the unskilled group.

Similarly, a much larger proportion of the industrial employees were Canadian born—nearly seventy per cent. as compared with 47 per cent.; it includes more French-

Canadians, and only a small percentage of Continental Europeans. The second largest group, as with the unemployed sample, were British-born, but in smaller

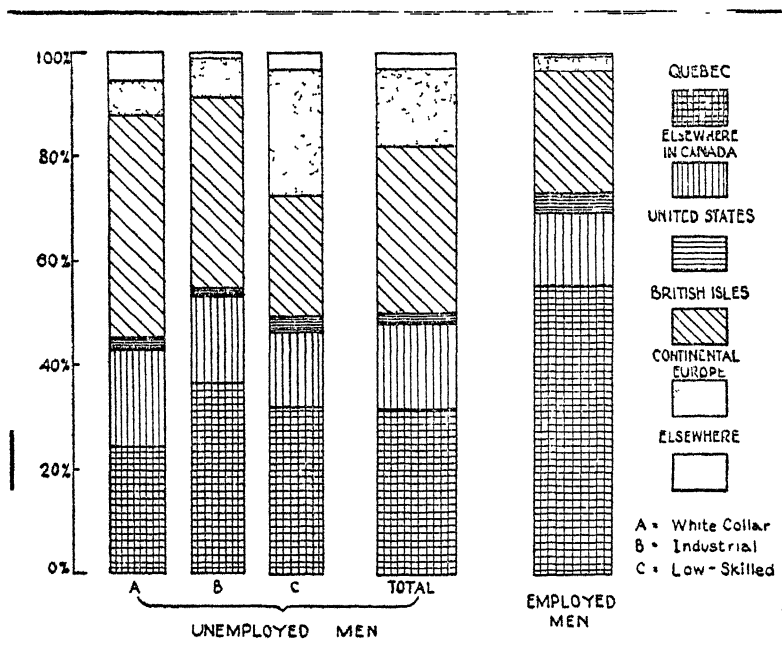


Fig 6. Birthplaces of the sample groups of unemployed and employed men

proportion. In several respects, therefore, it is a different group of citizens which is considered here, though the differences concerned are not the ones of most direct medical significance.

CHAPTER 5

NUTRITION AND ALLIED FACTORS

Food is one of the necessities of life, and in any consideration of health it is a major item. The nutritional state is determined largely by the amount and kind of food consumed, nevertheless, nutrition is not entirely dependent upon food. A well-balanced adequate diet may be consumed and yet the individual may be definitely malnourished. An enquiry into the underlying causes of poor nutrition is a much more complex problem than appears on the surface. It includes many social, racial and environmental factors in addition to the food supply. The degree of proficiency in the domestic arts, i.e., both the choosing and cooking of food, is of more than casual importance. Nutrition is also affected by overcrowding in the home, hours of sleep, work, and exercise, the physical state of the individual prior to and during the period of stress and, particularly, mental attitudes and emotional states.

Many of the avenues for investigating their interplay of forces were closed to the present survey. In so far as food itself is concerned, the amount available could not be determined with accuracy. At the time of the present enquiry the "family" men were receiving relief supplied through a co-operative committee of the city and social agencies, in the form of vouchers or "bons" at an established rate of sustenance (Table 12). The homeless men (largely the unskilled group) were simply provided with two meals and sleeping accommodation. Rent, fuel and clothing were dealt with separately, at first without much standardization. (Both the system of relief administration and the details of relief budgets have been considerably revised since this date. Allowances for other budget items have been added, and, with some exceptions, the food scale has been considerably increased, especially for the larger families.)¹

Several of the men undoubtedly received additional help from friends, neighbours, churches or other agencies. Many of the "homeless" type begged on the streets or from door to

¹Cf. p. 163 *et seq*

door and secured anywhere from twenty-five cents to a dollar daily. Some appeared to stress existing hardships to emphasize their need of help and in such cases food wants may have been exaggerated. Discrepancies in the stories were frequently noted. This does not apply to the whole group, but it is clear that conclusions based solely upon the ration schedule would be erroneous.

TABLE 12 WEEKLY FOOD RATION, MONTREAL RELIEF SCALES (AS AT 1933)

No. of Persons	Money Voucher	Bread (loaves)	Milk
2	\$2 00	4	One pint daily for each child under 14 years of age Not to exceed six pints per family
3	2 50	7	
4	3 00	10	
5	3 50	12	
6	4 00	14	
7	4 50	16	
8	5 00	18	
9	5 50	21	
10	6 00	21	
11	6 50	21	
12	7 00	21	
13	7 50	21	

It has been stated that the three status-groups do not represent exclusively the three types of bureaus from which the men were drawn. Differences in the standards of the men are therefore not necessarily indices of the success or failure of the relief measures adopted by the agencies concerned, which in fact did not vary greatly.

THE EVIDENCE OF WEIGHTS

The examinations which were made of weight in relation to age, height and other standards gave the following results, for the three occupational groups and the unemployed and employed men compared as totals. (This classification is followed throughout.)

The majority of the sub-standard cases were within a range of ten to twenty pounds underweight, but a few (eleven, or 11 per cent. of the total) were even more than twenty pounds below normal. The difference between the showing of the employed and the unemployed men is very marked. Whether the occupations of the employed workers match those of the unemployed men accurately or not, the margin is large enough

to suggest a definite correlation between unemployment and nutrition. Before commenting on the rates in the separate groups A-C, it is interesting to note the comparative reports of recent loss of weight made by the examinees themselves.

TABLE 13 WEIGHTS OF THE SAMPLE ADULT GROUPS

Status	Normal		Underweight*	
	No	P C	No	P C
A White-collar	136	61.3	79	35.5
B Industrial	206	60.0	134	39.0
C Unskilled	302	68.9	135	30.8
Total unemployed	644	64.3	359†	35.7
Employed group	749	74.8	253	25.2

*10-20 lbs

†Including men over 20 lbs underweight

The divergence indicated by this measurement is even greater—nearly four times as much weight loss recorded as among the employed workers, with the white-collar unemployed reporting losses for a quarter of their numbers. But there is a wide range of variation, which moreover does not correlate with the average periods of unemployment experienced by the men (11.9, 17.3, and 18.3 months for groups

TABLE 14 REPORTS OF LOSS OF WEIGHT

Status	No	P C
A. White-collar	56	25.2
B Industrial	44	12.8
C Unskilled	54	12.3
Total unemployed	154	15.4
Employed group	49	4.4

A-C respectively). If anything, the relationship shown between the history (a verbal statement of recent loss of weight) and the amount of unemployment, is inverse.

In interpreting this a wide margin has probably to be allowed for. The history of overweight is an important fact which is lacking. None of the men claimed or admitted an increase in weight during his period of unemployment. In some cases, the loss of weight claimed was great. One man

stated, and this was apparently true, that he had lost 60 pounds in 18 months. At examination, he weighed 184 pounds, well within normal limits, and was in excellent health. It is conceivable that many persons, within and without the ranks of the unemployed, have reduced their overweight by sheer force of circumstances. This should not be a generalization, but at the same time its bearing on health need not be minimized.

Fig. 7 in effect shows the difference between weights measured according to accepted standards and the men's

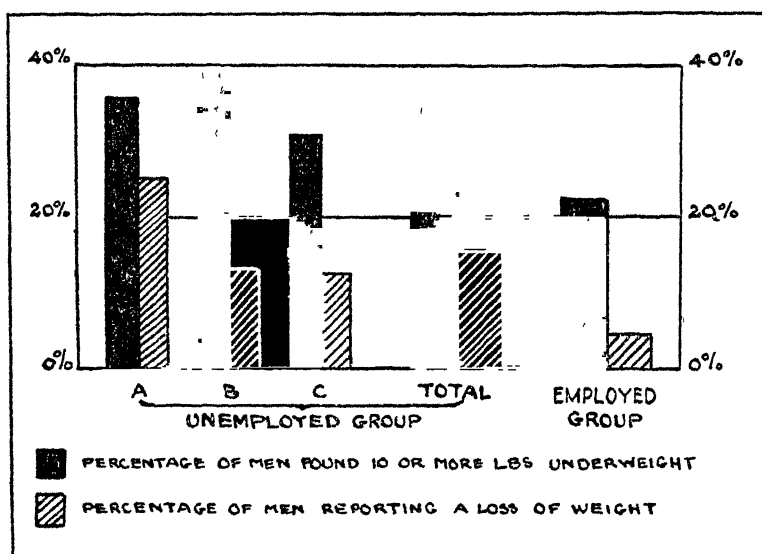


Fig 7 Comparison of proportions of men found to be 10 pounds or more underweight, and of men reporting a loss of weight

own views. The former are probably to be preferred. It is reasonable to suggest that to some extent at least, the higher figure recorded from the white-collar workers' statements is due to the fact that these men may have a better knowledge of their body-weight, or attach more importance to it. The average loss (in Table 14) is none the less high. The highest figure, viz. nearly 40 per cent., among the skilled and semi-skilled men, applies to a group which has the highest average age and family responsibility.

MALNUTRITION

The safe general statement appears to be that the white-collar and skilled men were most below standard. This is borne out by the average findings with regard to nutritional state.

Not all individuals who are found to be below average weight are malnourished, any more than those who may be underfed are considered to be ill. Loss of weight, particularly if excessive, is a guide to a diagnosis of malnutrition, but it is

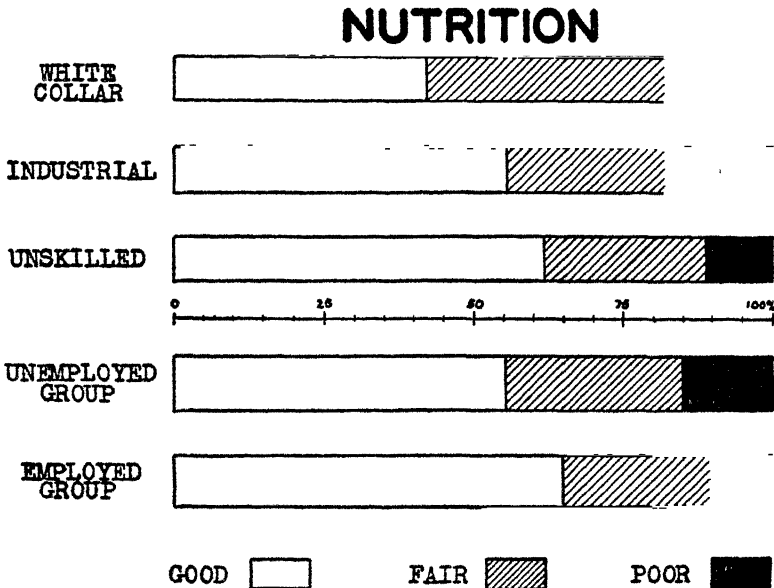


Fig. 8 Nutritional status of the sample groups of unemployed and employed men

not the sole criterion by which this is judged. Laboratory tests were not available for this study. Malnutrition, by clinical diagnosis, takes into consideration as criteria, the bony skeleton, posture, muscle tone, colour and condition of the skin, and the amount of subcutaneous fat. The seeming contradictions which some of the data present will be understood better if these facts are kept in mind.

In Table 15 and Fig. 8 the men examined are classified according to nutritional state as good, fair or poor. "Fair"

indicates a marginal rating; poor, a definitely malnourished condition.

More than one-sixth of both groups A and B exhibited malnutrition, and more than one-tenth of the unskilled men. In assessing these figures it must be remarked that the percentage of poor nutrition found among the comparative sample of employed men is surprisingly high (nearly 10 per cent markedly ill nourished and over one-third either poor or only fair). Either a more exacting diagnosis was employed, or the nutritional state of some of these workers was unusually low. By any standard, the unemployed men as a group were below average, only 55 per cent. exhibiting a good physical state.

Taking the fair and poor proportions together, the greatest undernutrition is revealed among the white-collar men and the least among the unskilled (56 and 45 per cent poor or fair, and 38 per cent respectively.) This is contrary to what might be expected, and correlates conversely also with the periods of unemployment among the men. It is by no means certain, however, that nutritional state is entirely a product of the unemployment period; and certain other elements in occupational status play a part. White-collar workers, employed or unemployed, are very likely to spend a larger part of their income on clothing, housing accommodation, and other budget items as compared with food,

TABLE 15 NUTRITION RATINGS FOR THE SAMPLE GROUPS

Status Group	Good		Fair		Poor	
	No	P C	No	P C	No	P C
A White-collar	93	41.9	90	40.5	39	17.6
B Industrial	190	55.4	93	27.1	60	17.5
C Unskilled	271	61.9	120	27.4	47	10.7
Total unemployed	554	55.2	303	30.2	146	14.6
Employed group	719	65.3	278	25.0	110	9.7

while the sedentary nature of their occupations also helps to encourage the belief that their food needs are small. The low-skilled worker, on the other hand, is more able or willing to economize on clothing and housing, and, certainly if his work is of a manual character, to set a higher rating upon food. Another consideration is that, by the very nature of

the work, only men with relatively good physique are able to do manual labour and remain in this occupation. Not all unskilled work is manual, but there are a sufficient number of such men in the sample for this factor to be of some influence.¹

DEFICIENCY DISEASES

It might be anticipated that among such a number of men living for some time on a circumscribed diet, at best just meeting so-called "threshold requirements", other disorders, nutritional in origin, might declare themselves. No serious diseases due to a diet deficient in essential inorganic food factors or vitamins were actually identified; although haemoglobin and other laboratory determinations to this end, not used in the present study, might have disclosed more. It is also possible that the early symptoms of at least two deficiency diseases, scurvy and beri-beri, were masked by complaints and physical findings common to other disorders as well as pre-scurvy and pre-beri-beri, and that these conditions were missed because of the limitations of diagnostic skill. One man, not included in this survey, who had been unemployed and a "dead beat" for many years, was sent to hospital with a diagnosis of scurvy.

Cases of swollen or spongy and bleeding gums, or looseness of the teeth, were found, but being mainly unaccompanied by other evidence of the scorbutic state were considered as of purely local significance. The very high percentage of men of Slavic and other Eastern European stocks who complained of or admitted to mild gastric distress as indicated by heaviness, fullness and symptoms other than those suggestive of ulcer, is noteworthy. Over 20 per cent. of all continental Europeans gave such a history as compared with 5 per cent. in all other groups.

The diet of the average mid-European consists largely of greasy and highly seasoned foods with liberal servings of pickles, which might be expected to cause undue gastric irritation and distress. In many Slavic homes large quantities of pickles are readily available, and when other vegetables fail the pickles are partaken of as freely as is the potato in the average Canadian home. Gastric distress of some kind is a common complaint of mid-Europeans at all times. An

¹A number of white-collar men and factory workers, etc. have resorted to unskilled work during the depression, but the classification used in the present study was based on normal occupation.

enquiry, carried into the homes of some of the unemployed men, did not reveal any obvious dietary defect particularly conducive to avitaminosis, of which such vague symptoms have been noted in early cases of beri-beri.¹

The evidence for and against potential deficiency disease is inconclusive. It is possible that increased periods of rest

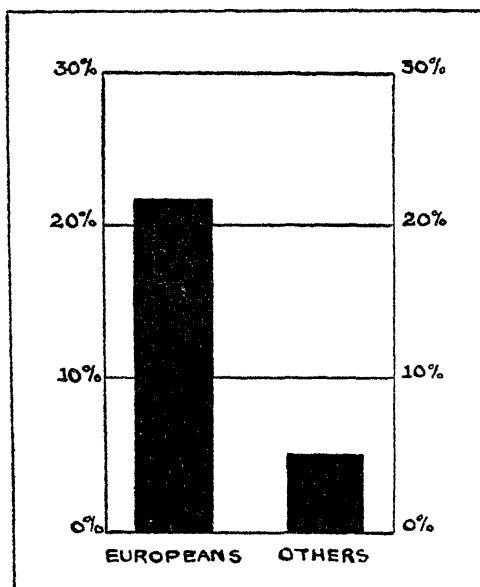


Fig. 9 Comparative prevalence of abdominal distress among central and eastern Europeans and others in the unemployed adults sample

and additional sleep, with the lowering of the metabolic rate, may have been factors preventing clinical signs of these diseases from manifesting themselves, if this was the case, this margin of safety would be lost with any increase in physical activity.

Four definite cases of diabetes were found among the group; urinalysis disclosed sugar in three times as many. The presence of albumin appeared to be of clinical significance in eight cases. Examination of urine for albumin and sugar was not made for ninety-five men in the sample, but the rates

¹Blackler: unpublished observations on beri-beri.

are based on a sufficiently large proportion of the total to be comparable

TABLE 16 URINARY FINDINGS

	No	P C
Albumin present	36	4.0
Of clinical significance	8	0.8
Sugar present	12	1.4
Confirmed diabetics	8	0.8

TUBERCULOSIS. INCIDENCE AND CAUSES

Eight cases of pulmonary tuberculosis were found among the unemployed men examined, representing a rate of 0.8 per cent. Six of the cases were in the two lower groups. Facilities for the radiological examination of the men were not available, but through the co-operation of several clinics, notably the Royal Edward Institute, some twenty suspects were given X-ray and sputum tests. Only one of the cases of tuberculosis (a frankly positive one on general diagnosis) was under the care of a physician, and an X-ray was not secured for this man. One clinically suspicious case was diagnosed radiologically as carcinoma.

It is difficult to obtain figures from other surveys which can be fairly compared with the present one. Many selected groups such as university students and life insurance policyholders, all of whom have been examined radiologically, are available, but as only a small percentage of the unemployed men were so examined a true basis for comparison does not exist. It is probable that many more positive cases would have been discovered through a routine X-ray examination. Among the employed workers group, all of whom were given an X-ray examination, five cases or 0.5 per cent. were found.

That there is a relationship between nutrition and tuberculosis is accepted by most authorities. Given a markedly malnourished population it is reasonable to assume that, other factors being equal, there will be a high incidence and a high death rate from tuberculosis. The special conditions in many countries during and after the Great War made this evident. Thus according to Sir George Newman, "In the year 1913, the population of Prussia was 41,649,062 and the deaths from tuberculosis 56,801. In 1919 the population had fallen to 39,340,447 and the deaths from tuberculosis had risen to 85,996." In England during the War the increase

amounted to 13 per cent., and in Holland, not a belligerent herself but exporting her milk and dairy products to the fighting powers, the increase was 35 per cent. The number of deaths from tuberculosis in Belgium reached its peak in

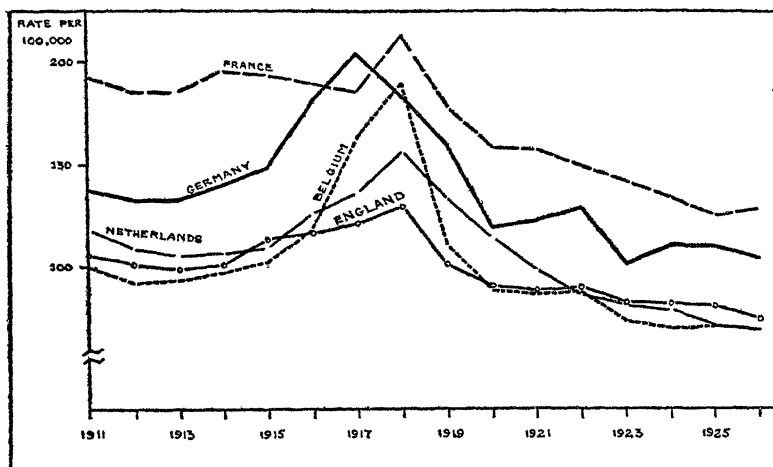


Fig. 10 Tuberculosis mortality in certain European countries, showing the changes during the war and post-war period. The absolute value of the rates cannot be given too much weight because of differences in the records, but the relative chronological variations may properly be compared.

1919.¹ These rates, including that of France, from 1911 to 1925 are shown graphically in Fig. 10.

On the other hand some tuberculosis is clearly an occupational risk. The first Canadian figures available on a comparative scale are shown in Table 17.² High proportions of tuberculosis deaths appear among some men whose work is particularly liable to the inhalation of rock-dust, etc., or to weather and other general exposure. None the less, the influence of economic factors is also shown, a large group of the better paid occupations appearing high in the list (where the proportion of tuberculosis deaths is lowest).

How far does unemployment affect the increase of tuberculosis? It is the considered opinion of Cobbett that

¹ (a) Newman: *On the State of the Public Health* (H M Stationery Office, London, 1923). (b) *Health Organization*, League of Nations Quarterly Bulletin, March 1933.

² Compiled from Special Report on Occupational Mortality in Canada, 1931-2; Bureau of Statistics, Ottawa, 1937, pp. 14-16 (Cf. p 8)

tuberculosis deaths during the War occurred largely in cases already tuberculous at the beginning of hostilities and that the disease was hastened to a fatal termination by two causes—increased working at injurious trades, and in a larger measure by interference with the food supply.¹ Certain other factors

TABLE 17 COMPARATIVE MORTALITY FROM TUBERCULOSIS
AMONG ADULTS IN CERTAIN SELECTED OCCUPATIONS
(CANADA BASED ON 1931-2)

Occupation	Annual Rate ²	Occupation	Annual Rate ²
Owners and managers, manufacturing industry	22	Clergymen	76
Owners and managers, transport industries	28	Carpenters	78
Locomotive engineers, firemen	34	Salesstaffs	81
Railway conductors, brakemen, expressmen, etc	38	Textile and clothing workers	82
Teachers, professors, principals, etc	46	Owners and managers of restaurants, hotels, boarding-houses	85
Lawyers, judges, notaries, etc	51	Office workers	88
Stationary enginemmen, firemen	51	Plumbers, steam fitters, etc	94
Retail store owners and managers	52	Coal miners	96
Machinists, tool makers	55	Bricklayers, masons	98
Farmers ³	59	Lumbermen, loggers	99
Commercial travellers, sales agents, etc	59	Painters, decorators, glaziers	106
Bakers, biscuit and confectionery makers	64	Cooks, domestics, and other personal service workers	108
Drivers, deliverymen, chauffeurs	66	Barbers, hairdressers	120
Mechanics	73	Labourers (other than agricultural) ⁴	124
Electricians, wiremen	74	Fishermen	158
Blacksmiths, hammermen, forgemen	75	Leather workers, tanners	158
Compositors, printers	75	Metal miners, quarriers, etc	172
		Workers in stone, brick, lime, glass manufacture	205
		All males aged 20-64	78

besides reduction in food supplies undoubtedly played a part: increased physical activity, a high degree of excitement, and loss of sleep all characterized the War days. The therapeutic and preventive values of relaxation and sleep in maintaining a higher state of resistance should not be ignored, however enigmatic and unmeasurable they may appear. It is generally accepted that old, quiescent, sub-clinical lesions acquire fresh

¹ Cf. p. 60, footnote 1

² Percentage which the deaths from tuberculosis (respiratory system only) form of deaths from all causes in this occupational group. Rates are standardized for age-distribution.

³ Does not include farm labourers.

⁴ Includes some factory workers, and also most longshoremen.

activity as a result of a lowered health standard. It is of some significance, therefore, that two of the individuals among the group examined were diagnosed as tuberculous many years ago, and after spending considerable time in sanatoria were discharged as cured. Nervous tensions, loss of sleep, physical lassitude or exhaustion were in these cases definite products of prolonged unemployment, apart altogether from the matter of nutrition.

On tuberculosis alone, however, it is probable that the present study does not provide a sufficient range of evidence. A great deal more needs to be done particularly in diagnosis and preventive work at early ages. The long-period trend in all Western countries is that of a fall in tuberculosis mortality,¹ more particularly since the discovery of the tubercle bacillus over fifty years ago, though the record of improvement antedates this. Diagnosis itself has improved, so that more cases are recorded; and this and other factors often make statistical data difficult of appraisal.² None the less, serious problems of tuberculosis may exist, or actually become worse, in those parts of the community where unemployment and poverty are greatest, even though a decline is being registered in the general statistics. Thus increased mortality from tuberculosis has been recorded in certain districts in New York City despite a falling T B death rate for the whole city. The worst districts were noticeably those where the socio-economic status of the residents was low. The number of cases notified in the Borough of Manhattan rose from 264 per 100,000 in 1928 to 324 per 100,000 in 1931, although the rate for the city declined from 173 to 166 during that period. It is true that the removal of certain classes of people from the "dark areas" of Manhattan to other boroughs, leaving the negro and others of the more susceptible races behind, has been a factor in this increase and introduces an element of selectivity into the picture, but the correlation is clear.

In Montreal, tuberculosis mortality has been relatively high because anti-tuberculosis work was started comparatively late. In the years 1924-1928 the average death rate was as high as 131 per 100,000 of population. There was a slight rise in 1929, but after that year the rate fell steadily to 75 per

¹Cobbett "The Decline of Tuberculosis and the Increase in Mortality During the War". *Journal of Hygiene*, Vol. 30, No. 1, April 1930

²Burnet. "Vue d'ensemble sur la tuberculose, maladie sociale". *Revue d'hygiène et de médecine préventive*, Vol. 55, 1933.

100,000 in the year 1935. As Fig. 11 shows, however, the rate has risen again, in Canada generally, but most markedly in Quebec Province and Montreal. In the latter city, only a slight recession from the high figures of the year 1936 is recorded by the rates for the first half of 1937—92.7 per 100,000, as against 94.7 in the comparable period of the previous year. It must be remembered that increased

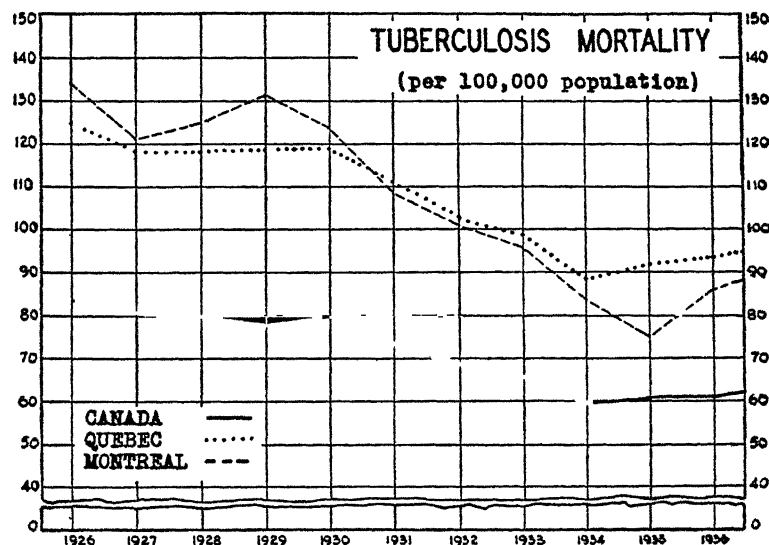


Fig 11 Tuberculosis death rates in Canada, Quebec Province, and Montreal City, 1926-36

deaths in a given year presuppose a greater prevalence of sickness in previous years. Statistics from the two principal tuberculosis institutions in the city¹ show a steadily increasing number of cases diagnosed and under treatment. This is of course a sign of progress, not necessarily of increasing prevalence of the disease. But on the other hand, the number of cases known to the dispensaries through their clinics and family and individual contacts, is considerably larger than the total of persons under institutional care, and more hospital beds are a continuous need. Clearly, conflicting trends are in operation; in spite of some unfavourable signs, it is not yet

¹ Table III, Appendix.

possible to gauge whether the depression in its later years has widened the incidence of the "white scourge".

To sum up some of the salient points of this chapter, underweight and malnutrition were found to be more common among the unemployed than among the employed industrial workers. Further, the highest economic status group (white-collar workers), with a shorter average period of unemployment, had a slightly higher percentage of fair and poor nutrition than the semi-skilled and 20 per cent higher than the unskilled group. Clinical cases of deficiency diseases were not identified, although it appeared likely that border line cases existed. A rather special finding was that gastric complaints, without apparent organic basis were common among Central European stocks. And at least 0.3 per cent. and potentially more of the unemployed examined were diabetics not receiving any treatment.

Pulmonary tuberculosis was revealed at a rate of 8 per 1,000. This is above the rate found among the employed group; and X-ray examinations, which would have provided a more correct diagnostic comparison with these employed workers, would almost certainly have established a greater number of liability-cases. The general evidence points to lower nutritional status as a definite contributing factor in tuberculosis, while more recent statistics show an increase in tuberculosis deaths, and a check in the steady progress which was formerly being made in arresting the spread of the disease.

CHAPTER 6

DENTITION, VISION, AND HEARING

DENTAL STANDARDS among the men were observed by both an examination of teeth and gums and through a record of the times at which dental care was last received. As might be expected, there was marked evidence that advice and treatment are more generally secured by the upper than the lower status groups. The proportions among the unemployed who had never had dental care were 16.7 per cent. for the white-collar workers as compared with 49.6 per cent. and 68.6 per cent. among the two lower groups. The records for the employed sample are incomplete on this point, as nearly 30 per cent. were classed as "unstated". This introduces a margin of error in the comparison, but in Fig. 12 the attempt was made to distribute this equably.

The degree of dental care is not entirely a function of economic status, however. Because of its relevance to factors referred to below, the difference is also shown in Fig. 12 between the records of British-born, English-Canadians and French-Canadians as a group, and of Europeans and others.

In the examination of the present condition of their teeth and gums the men were rated good, fair, or bad. For the purpose of this survey an interpretation in keeping with everyday standards, but not too rigid, was used. Thus, in the case of small fillings and slight dental imperfections in an otherwise healthy mouth, the teeth were classed as good. Classification as "bad", however, implies in addition to dental caries, grossly infected gums. The relatively high percentage of all groups with "good" teeth does not mean that the teeth were perfect, as a more critical analysis would place a number of these in the category "fair".

The percentage of "poor" teeth in each of the three unemployed groups was almost double that of the employed workers' group. But the percentage classed as "good" is also higher for the unemployed. This somewhat anomalous condition is explained by the very much larger number of individuals in the employed sample whose teeth were considered fair. A conservative summation, however, is that over 40 per cent. of the unemployed men were in real need

of dental treatment; over 52 per cent. of these were over forty years of age. These are high figures, though other surveys have revealed greater needs. A survey of 1,200 unemployed men made in San Francisco in 1932 found fifty per cent.

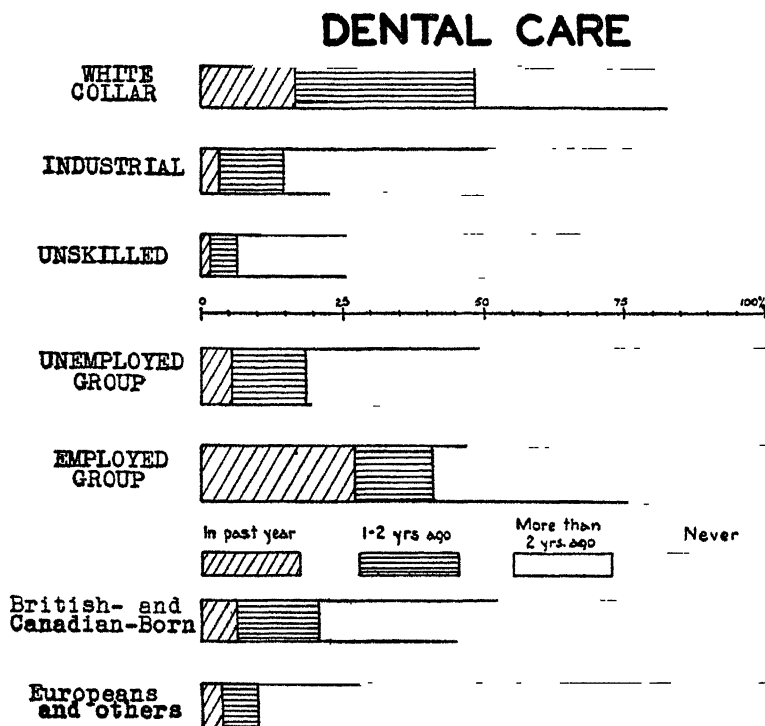


Fig 12. Comparison of dental care received by the men examined.

requiring dental care; another made in the same year, of 1,000 Negro workers, found over three-quarters in need of attention.¹

The cases of severe dental caries and infected gums (Fig. 13) do not show as wide a variation between groups as the lack of dental care (Fig. 12) would suggest. Many factors interact to give this result. It is generally true that dental prophylaxis

¹David and Warner, "Medical Care Survey of Unemployed Men in San Francisco", *California and Western Medicine*, Vol. 37, December 1932, pp. 372-5
(b) Allen; "Physical Impairment Among 1,000 Negro Workers", *American Journal of Public Health*, June 1932, pp. 579-86.

varies inversely with social status. It is to be anticipated that poorer teeth would be found among men with a small or non-existent margin for health expenditures, or whose parents would have been least likely to send their children to the dentist. But the results also depend on the national elements which make up the groups. Men born in Great Britain, despite their having received proportionately more dental care, showed not only a higher percentage of carious teeth

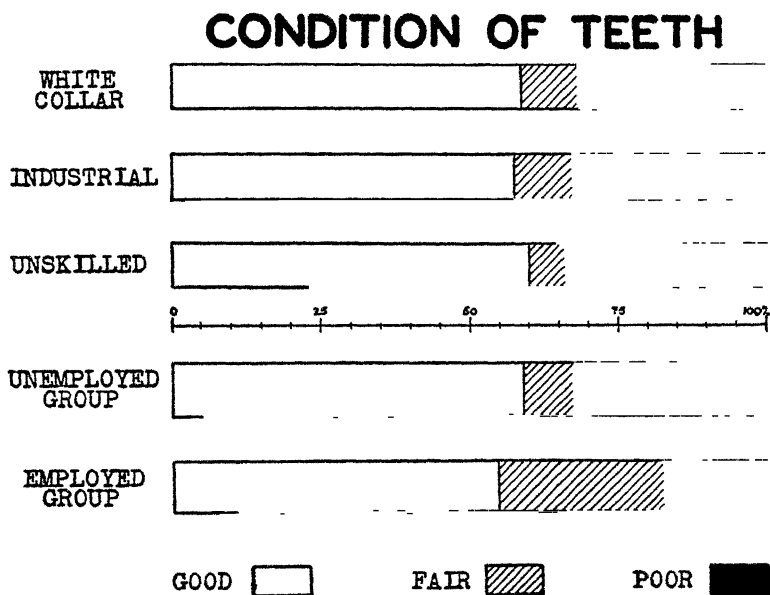


Fig 13 Condition of teeth among the unemployed, as compared with the employed group.

but also a greater degree of decay than other national groups. In seeking an explanation for this, enquiry should be directed toward a consideration of dietary factors, whether it be the coarseness, or other physical quality, of the food used, some nutritional element or vitamin deficiency. The extensive literature on this subject shows an increasing emphasis upon nutrition rather than purely local factors.

Many more disturbances of a systemic nature than were actually found, might have been expected from the presence of infections. The incidence of arthritis was low. Few com-

plaints of "sciatica" or "lumbago" were received. Constipation was not more common among people with bad teeth, who might have poorer powers of mastication, than among those with good. Persons of Slavic origin, who complained so frequently of stomach disorders, appeared to have better teeth than most other racial groups. It is difficult to believe that individuals with an extreme degree of dental caries, in many cases with stumps of teeth worn down to the level of their spongy and infected gums, could be so free from symptoms usually considered as arising from such faulty dental conditions. The medical iconoclast might suggest that this freedom from symptoms is due, in part, to the free drainage thus afforded, compared to the possible locking in of an infective process by extensive fillings, crown or bridge work. But a need for further study is clearly indicated.

TABLE 18 DENTAL CARE RECEIVED

Status Group	Advice or Treatment Received							
	In past year		1-2 years ago		More than two years ago		Never	
	No	%	No	%	No	%	No	%
A White-collar	38	17.1	70	31.5	77	34.7	37	16.7
B Industrial	10	2.9	39	11.6	123	35.9	170	49.6
C Unskilled	7	1.6	21	4.8	110	25.0	301	68.6
Total unemployed	55	5.5	130	13.0	310	30.9	508	50.6
Employed group ¹	215	19.4	106	9.6	272	24.6	185	16.7

TABLE 19 STANDARDS OF TEETH AND GUMS

Status Group	Good		Fair		Bad	
	No	%	No	%	No	%
A White-collar	131	59.0	21	9.5	70	31.5
B Industrial	197	57.4	35	10.2	111	32.4
C Unskilled	261	59.6	28	6.4	149	34.0
Total unemployed	589	58.7	84	8.4	330	32.9
Employed group	603	54.5	310	28.0	194	17.5

¹ Unstated, 329 (29.7 per cent of total).

VISION AND OTHER EYE DEFECTS

Vision was tested by means of the Snellen Test Card. The results, in Table 20, distinguish those who wore satisfactory glasses from those whose defects were uncorrected. The unemployed men as a group were revealed as definitely under a handicap in this respect. The proportion with impaired vision exceeded the proportion in the comparative group (employed industrial workers) by 7 per cent, and the number whose defects were corrected by glasses was 12.7 per cent as against 46.8 per cent. That no less than 87 per cent. of the unemployed who were in need of glasses did not have them is a striking figure; but as the percentage among the employed men (53.2) shows, the general rate in this matter is itself high. Aside from this, the incidence of primary eye defects among the unemployed as a whole (32 per cent.) is less than that reported in the survey of Negro workers referred to above, in which the rate was 50 per cent. The age distribution of Dr. Allen's group closely approximated the present sample, but the racial composition may have favoured the higher rate. In the Duluth survey¹ 60 per cent.

TABLE 20 RESULTS OF VISION TESTS

Status Group	Normal Sight		Defective Sight		Uncorrected by Glasses	
	No	%	No	%	No	%
A White-collar	147	66.2	75	33.8	62	82.7
B Industrial	225	65.6	118	34.4	108	91.5
C Unskilled	309	70.5	129	29.5	111	86.1
Total unemployed	681	67.8	322	32.3	281	87.3
Employed group	825	74.5	282	25.5	150	53.2

of the casual workers examined had visual defects as compared with 30 per cent. of the low-skilled in the present study. This may be explained by the higher ages of the Duluth group, half of whom were over fifty years of age and more than two-thirds over forty.²

Further studies would seem to be necessary before a conclusion could be drawn on the relationship of impaired sight

¹Diehl *The Duluth Casual Labour Group*. Employment Stabilization Research Institute, University of Minnesota, March, 1932

²Cf. Table 9, Chapter 4.

to occupational status. The defective proportion among the white-collar and industrial workers is practically the same, and actually four or five per cent lower among the unskilled group. It is likely, however, that had the latter contained fewer young men, the figure would have been appreciably greater.

The number in the unemployed sample with satisfactorily corrected vision, although very low (12.7 per cent) is higher

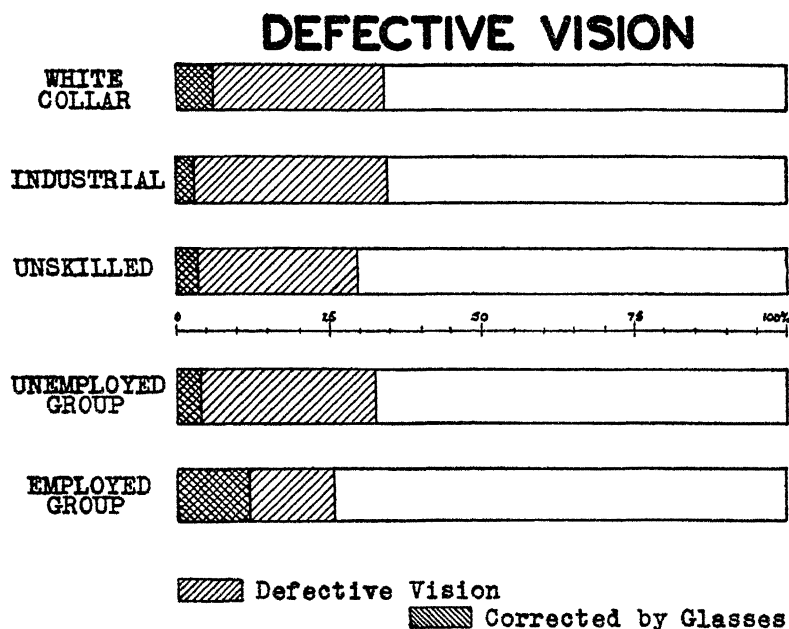


Fig. 14 Incidence of defective vision among the unemployed and employed samples, and proportion for whom it was corrected by glasses

than in the Duluth Group, among whom the proportion was less than 5 per cent. The proportion of 12.7 per cent. should be compared with that for the control group 46.8 per cent. of the employed workers who needed glasses had them. Among the unemployed, glasses were commonest among the office-workers as might be expected; but the proportion was lowest among the industrial sub-group, although the character of their work would presuppose a greater need for the correction of defects.

Some of the unemployed periodically wore spectacles with very strong lenses, which can be bought cheaply anywhere. Others paid a nominal price for glasses prescribed by well-advertised optometrists, which very often failed to suit their sight. Still others admitted that low incomes over a period of years, quite apart from the present depression, had prevented them from securing the required glasses. The vast

TABLE 21. OTHER EYE DEFECTS

Status Group	Non-reacting pupils				Other defects		Total abnormal	
	One eye		Both Eyes					
	No.	%	No	%	No	%	No	%
A White-collar	0		2	0.9	6	2.7	8	3.6
B Industrial	0		2	0.6	5	1.4	7	2.0
C Unskilled	1	0.2	4	1.6	7	0.9	12	2.7
Total unemployed	1	0.1	8	0.8	18	1.8	27	2.7
Employed group	2	0.2	4	0.3	21	1.9	27	2.4

majority, however, while aware of faulty vision, either did not feel the need for glasses or considered this to be of less importance than other personal or domestic requirements.

Two men included in the sample were practically blind. One had to be led about; the other, after spending some time in a school for the blind, left because his vision was not then sufficiently impaired to engage at tasks allotted to the blind. Other eye defects, covered by the table above, include cataract, keratitis, severe blepharitis and enucleations. These conditions number eighteen all told, as against twenty-one for the industrial group. The greater number of abnormalities were found among the unskilled labourers. Minor degrees of conjunctivitis and congestion were not included, but two cases of congestion following upon long, exposed train rides are worthy of note.

AUDITORY DEFECTS

The amount of defective hearing found among the unemployed men, while a relatively small proportion of the total, was higher than for the "control" sample of employed workers. As compared with a rate of 1.3 per cent. among the latter, three times as many of the unemployed suffered from markedly defective hearing.

It is of interest to note the greater prevalence of "one-ear deafness" among white-collar men and of deafness in both ears among the unskilled. But little evidence can be brought forward to indicate why office workers should show a greater tendency to one-ear deafness than artisans or labourers.

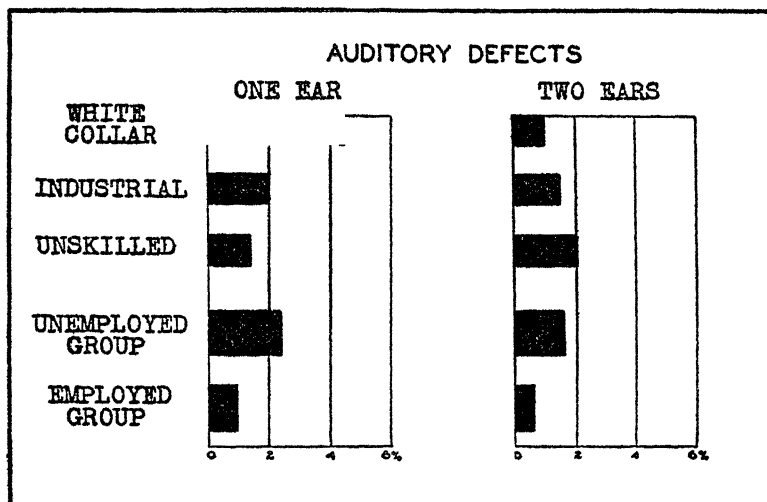


Fig. 15 Auditory defects among the unemployed and employed sample groups.

How far the noise of working conditions in factories, or the heavy industries, is responsible¹ cannot be inferred from the available data, especially as the rates measured for the employed (industrial workers) group are very low. Factors of other than industrial origin may therefore be suspected.

Ten cases of discharging ears were found among the white-collar groups. This represents a total incidence of 2.1 per cent., also three times the rate found for the employed sample. The presence of wax, while fairly common, was not entered on the examination schedules except where excessive or impacted. Comparisons cannot be made with the employed group as this point was not recorded, and in the present data the differences between the three status-groups are only fractional. The single other defect not shown in Table 22 was a severe eczema of the external ear and canal in the case

¹Smyth: "Noise in Industry", *Annals of Otology, Rhinology, and Laryngology*, Dec. 1932, pp. 1108-1116.

TABLE 22 CONDITION OF EARS

Status Group	Deafness				Cerumen		Discharge		Total abnormal ¹	
	One ear		Both ears							
	No	%	No	%	No	%	No.	%	No	%
A White-collar	10	4.5	2	0.9	7	3.2	1	0.4	20	9.0
B Industrial	7	2.0	5	1.4	9	2.6	10	2.9	32	9.2
C Unskilled	6	1.4	9	2.0	13	3.0	10	2.3	38	8.7
Unemployed group	23	2.3	16	1.6	29	2.9	21	2.1	90	9.0
Employed group	9	0.8	6	0.5			8	0.7	23	2.0

of one of the men in Group B. The total abnormal proportion, nine per cent., is sufficiently greater than that for the control group (two per cent.) to indicate definitely a somewhat lower health level among the unemployed men as a whole.

SUMMARY

In the group examined, the condition of the teeth was much more intimately related to the socio-economic status of the groups than vision and eye defects. In both respects, however, considerable need for treatment was disclosed. A high percentage of all the unemployed groups had badly decayed teeth and infected gums, and, while the general showing in respect of eyesight was not unduly bad, a large number needed glasses. The rate both of deafness and of other auditory defects was three times as high among the unemployed as among the comparative group of employed men. Other findings gave less positive indications of their cause. It is suggested that dietary factors and environmental and other conditions peculiar to particular national groups are contributory to dental disorders, and these cut across a direct economic-status differentiation. Time did not permit investigation of the causes of deafness and related ailments. Variations between the groups in respect of eye defects were of interest, but not on a sufficiently large scale to warrant generalization.

¹ Including one other defect (referred to in text).

CHAPTER 7

RESPIRATORY AND CARDIO-VASCULAR CONDITIONS

NASAL DEFECTS and the condition of heart and vascular functions are not necessarily connected, but it is convenient to deal with them together in this section. Nasal defects observed under examination were recorded only where a definite obstruction to normal breathing was produced. Acute nasopharyngitis, post-nasal catarrh and minor nasal troubles were omitted, as also were certain other findings mentioned below. The cardio-vascular record was taken as including both organic and functional factors.

Cases of defective nasal breathing were more frequent than were found in the industrial workers' examinations, but the proportion is not unduly high. A worse showing would have resulted if all deviations from normal were considered. At

TABLE 23 DEFECTIVE NASAL BREATHING

Status Group	Normal		Deviated Septum		Hyp turbinatus, polpi, etc	
	No	%	No	%	No	%
A. White-collar	202	89.9	17	8.8	3	1.3
B. Industrial	321	93.6	18	5.2	4	1.2
C. Unskilled	414	94.5	18	4.1	6	1.4
Total unemployed	937	93.5	53	5.2	13	1.3
Employed group	1,070	96.6	33	3.0	4	0.4

TABLE 24. CONDITION OF TONSILS

Status Group	Removed		Infected		Enlarged		Total defective	
	No.	%	No	%	No.	%	No.	%
A. White-collar	22	9.9	12	5.4	13	5.9	25	11.3
B. Industrial	17	5.0	23	6.7	8	2.3	31	9.0
C. Unskilled	13	3.0	32	7.2	13	3.0	45	10.2
Total unemployed	52	5.2	67	6.7	34	3.4	101	10.1
Employed group	81	7.3	7	0.7	21	1.9	28	2.6

least two outbreaks of the common cold reached epidemic proportions during the period of the medical examinations, but the exclusion of symptoms due to this avoids false impressions which might otherwise have been obtained. For the same reason minor degrees of deviated septa or hypertrophied turbinates have also been omitted. It is generally agreed that some degree of these latter abnormal conditions will be found in from 20 to 60 per cent. of all adults. Acute sinusitis, requiring surgical care, was found in one case.

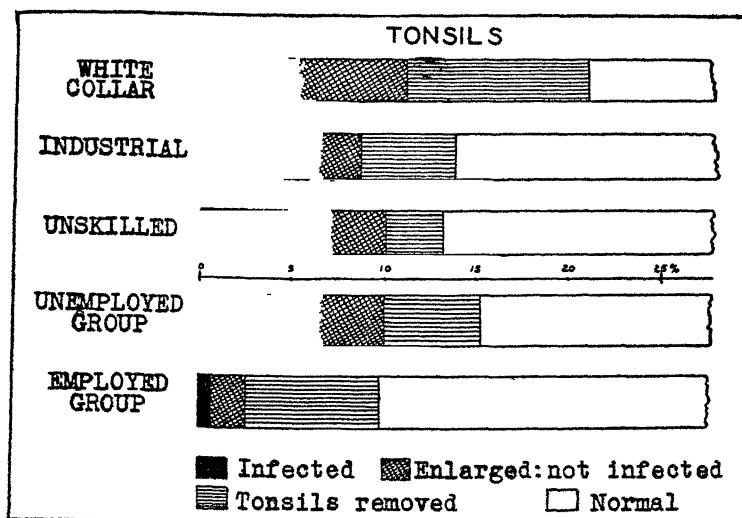


Fig 16. Condition of tonsils and past tonsillectomies, unemployed and employed adult samples

In general this aspect of physical health would not appear to be directly related to economic status. A much more definite connection is shown with regard to tonsils and related defects. Four groupings were adopted for these as shown in Table 24. The percentage with infected throats increases as one passes down the economic scale, with 7.2 per cent. among the unskilled men. The reverse order, an indication of better general attention, is seen in the proportion of those whose tonsils had been removed (9.9 per cent. of the white-collar workers compared with only 3 per cent. of the labourers). Fewer of the unemployed as a whole than of the employed sample had had tonsil operations.

A rate of ten per cent. for enlarged and infected tonsils is not unduly high when compared with the results of other surveys. A certain amount of atrophic change is to be expected in the upper age groups, such as those under consideration, which contributes to the low percentages recorded. In the Duluth survey, however, in spite of the men here having been somewhat older, the figures are nearly 13 per cent. higher than for the unemployed in the present study. The division between what is considered normal, infected and enlarged admittedly may be, in certain instances, rather finely drawn. Thus a severe cold or sore throat would, undoubtedly, serve to move a not inconsiderable number

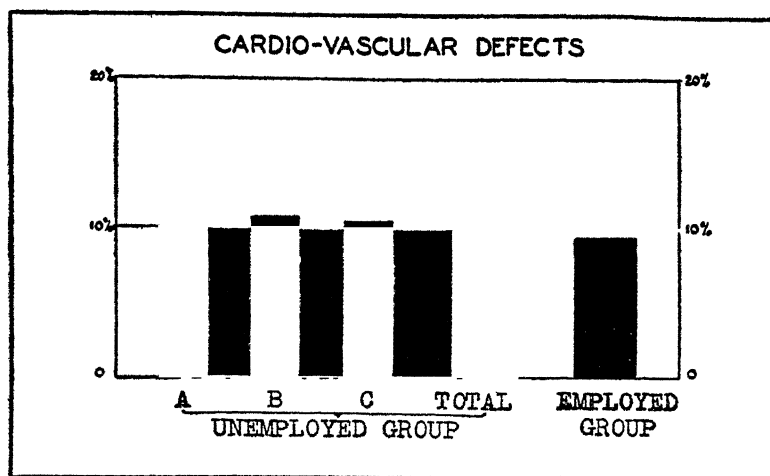


Fig 17 Comparative percentages of all cardio-vascular defects

from the enlarged to the infected group. None the less, it appears that a very rigid interpretation was applied to the term "infected" in the examination of the industrial group, when only seven cases were found in a group of 1,107.

Among those who had their tonsils removed the occasional case showed that either tonsillar tissue had been left behind or, in the interval, had reformed; a condition which is not unexpected.¹ Excluding these, if infection of the tonsils is taken as the standard for tonsillectomy, 67 of the unemployed men, as compared with only 7 of the employed men, required the operation.

¹Grant: "Students' Health Survey in Dalhousie University", *Canadian Public Health Journal*, October 1933.

CARDIO-VASCULAR CONDITIONS

The total proportion of all heart and vascular abnormalities, organic and functional, found among the unemployed men was 11.3 per cent. The incidence was highest among the white-collar men (14.4 per cent) and about equal at a little over ten per cent. in the two manual groups. All of these are above the rate found in the industrial workers' examination (9.1 per cent.). The difference in the total figures is significant chiefly for the office workers, who would appear to be more definitely liable to cardiac weaknesses.

There are also, however, considerable differences in the findings which make up the totals as between the two samples. Among the unemployed, 15 were considered to have abnormally high blood pressure, whereas in the industrial group the number was 39. Among the former 20 showed hypotension, the latter none. Cardiac enlargement was almost twice as frequent among the working group although valvular lesions were twice as numerous among the unemployed. Similarly, the unemployed had within their ranks a higher number of individuals with marked arteriosclerosis, although the reverse was true with regard to slight degrees of arteriosclerosis. Other disturbances, chiefly extrasystoles, irregularities, etc., totalled 19 for the unemployed as compared with only 9 among the industrial workers. Allowing for possible differences of interpretation in two examinations, the most marked

TABLE 25 CARDIO-VASCULAR DEFECTS

Findings	Unemployed Men				Employed Workers
	White-collar	Industrial	Unskilled	Total	
High blood pressure	6	1	8	15	39
Low blood pressure	3	10	7	20	0
Cardiac enlargement	2	7	3	12	22
Valvular lesions	6	6	9	21	10
Myocardial insufficiency	1	1	0	2	1
Marked arteriosclerosis	7	6	5	18	3
Slight arteriosclerosis	3	1	4	8	18
Vasomotor disturbances	0	1	0	1	0
Sinus arrhythmia, extrasystoles, tachycardia, bradycardia, other irregularities	4	3	9	16	8
Abnormal No	32	36	45	113	101
Abnormal P.C	14.4	10.5	10.3	11.3	9.1

divergences would appear to be those relating to high and low blood pressure.

The higher percentage of defects revealed among white-collar men fits in with the impression received at the examinations that, contrary to the history given of such contributory factors as focal or other infections and hard manual labour, cardiac and vascular changes become more prevalent with higher socio-economic status. A more critical analysis of a larger group would be required to verify this. But having regard to the somewhat lower age-grouping of the office workers,¹ which should improve their showing as compared with the manual workers, other things being equal, a definite tendency here seems to be indicated. For the unemployed as a whole, age was a clearly correlated factor. Among those over 40 years of age, 17 per cent. had cardiovascular defects; among those under 40, only 6 per cent. The number giving a history of alleged predisposing factors was only fractionally greater in the older age group. This indicates that with advancing years, and having due regard to other factors (e.g., later manifestations of syphilis) the chief influence is that of senile change.

SUMMARY

The unemployed compare unfavourably with the industrial group both as to the presence of abnormal conditions of nose and throat and as to the prevalence of untreated or uncorrected defects of these parts. Sixty-seven of the unemployed had infected tonsils (about 7 per cent.); only seven in the employed sample were so recorded. Approximately six per cent. of the unemployed showed defective nasal breathing due to deviated septa, enlarged turbinates or polypi; this percentage is about double that for the comparative group.

The percentage of cardio-vascular defects among the unemployed was over 2 per cent. greater than among employed industrial workers. An outstanding finding was the higher percentage of hypertension among the employed workers, and the reverse situation as regards hypotension. Another was the markedly higher rate of cardiac defects in general among men of white-collar occupations. Other findings, depending on small numbers, would necessarily be influenced by the particular interpretations of the examiners, but were not evidently related to employment status.

¹Cf. Table 9, Chapter 4.

CHAPTER 8

VENEREAL DISEASES

THE SUBJECT of venereal disease is still characterized by two facts. the inadequacy of information on its prevalence as compared with other medical statistics, and the need for wider and more enlightened education on its nature and treatment. It is now known that one per cent of the people in the United States, on an average day, are being treated for venereal disease.¹ According to Nelson², "during the ten years ending with 1931, there were reported in the United States 279,000 more cases of syphilis than of scarlet fever, 950,000 more than diphtheria, and 1,640,000 more than typhoid fever". Gonorrhoea cases were two to three times more numerous than syphilis. These figures are of greater significance when it is realized that while other communicable diseases are usually well reported, the venereal diseases are seldom completely so, possibly not more than one-quarter in some places,³ and even less than this in poorly organized communities. General figures have not been estimated for Canada, but a venereal disease survey conducted in Toronto⁴ a few years ago showed 2,968 cases of syphilis and 2,154 of gonorrhoea under treatment or observation, which gives rates of 4.9 and 3.5 per thousand of population.

It was important in these circumstances to include the venereal diseases in the survey of unemployed men, even though no direct comparative material was available as they were not included in the employed workers' examinations. In the present instance, besides direct clinical discovery, a record was sought as far as possible of histories of past infection.

It should be kept in mind that submission was voluntary. Many men would naturally evade an examination which was so detailed and which, while giving a diagnosis, offered no treatment at the time. A history of past venereal infection is usually not given readily, especially if, at the time of examina-

¹Mills. "The Extent of Illness Prevailing in the U S A.", Committee on the Cost of Medical Care, Washington, D C

²Nelson. *The Commonwealth*, Massachusetts Dept of Health (Vol XX, No. 2, April, 1933).

³*Ibid.*

⁴Fenwick, *Canadian Public Health Journal*, May 1930.

tion, the person concerned is in fairly good physical condition. If it does not appear relevant to a diagnosis of disease, such a history is generally denied. This attitude was more pronounced among the men of higher occupational grade; the lower-skilled and labouring workers were more frank to admit such a history. Some, indeed, were prone to regard the occurrence with complacency. This difference in willingness

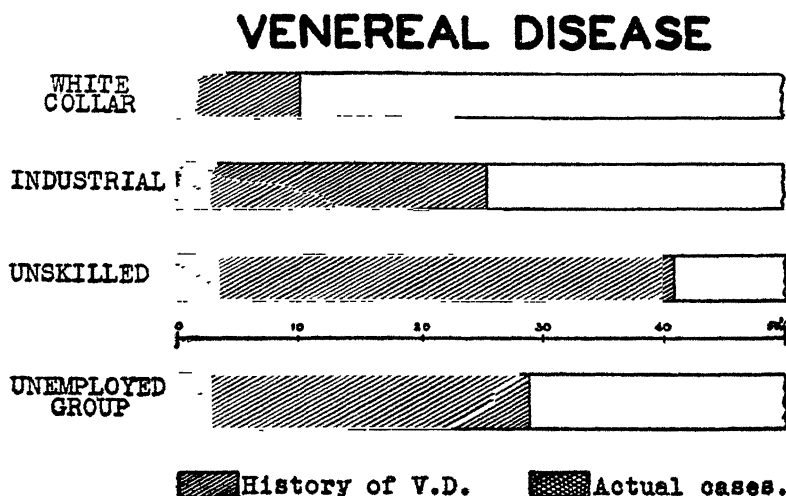


Fig 18 Incidence of venereal disease in the unemployed adults sample

to accept medical examination, and in reluctance to admit a history of venereal infection, itself demonstrated a strong relationship between the socio-economic status and attitude towards venereal disease.

The results from all those examined were that no less than two hundred and sixty-two individuals, 26 per cent., gave a history of 308 past venereal infections. Gonorrhoea infection was admitted by two hundred and thirty-five (23.4 per cent.), syphilis by fifty-six (5.6 per cent.), and other venereal diseases by seventeen more. Twenty-six cases of existent disease were discovered clinically (Table 26). These were previously undiagnosed and therefore untreated cases, many of whom would never ordinarily have been seen by a physician.

The clinical findings parallel very closely those of the San Francisco survey.¹ Among those 1,200 unemployed men

¹Cf. p. 64, footnote.

four clinical cases of early syphilis and twenty cases of gonorrhoea were reported. Wassermann tests for an additional twenty men gave ten positive reactions, making all told a total of fourteen cases of syphilis. This is equivalent to rates of 12 per thousand for syphilis and 16 per thousand for gonorrhoea. The observed rates for the Montreal group are 4 per thousand for syphilis and 20 per thousand for gonorrhoea.

TABLE 26 VENEREAL DISEASE FINDINGS

Findings	White-collar	Industrial	Unskilled	Total	
				No	%
<i>History of V D</i>					
Gonorrhoea	16	68	151	235	23.4
Syphilis	3	20	53	56	5.6
Other		7	10	17	1.7
Total No ¹	19	78	165)	262	26.1
P C	8.5	22.7	37.7)		
<i>Clinical Manifestation</i>					
Gonorrhoea	2	8	10	20	2.0
Syphilis	1	1	2	4	0.4
Other			2	2	0.2
Total No	3	9	14)	26	2.6
P C	1.3	2.6	3.2)		

No serological tests were made, however, and undoubtedly many chronic cases of gonorrhoea and inactive syphilis were missed due to the limitations of the examination procedure.

The majority of the twenty cases of gonorrhoea were chronic, although the degree of chronicity was not such as to escape detection by ordinary clinical means. Three of the four cases of syphilis showed the primary manifestations of the disease. In some cases it was suspected that venereal disease was a factor in causing cardio-vascular lesions, as indicated in the previous chapter, while in others it was more doubtful. The survey brought to light one instance in which gonorrhoea was contracted through homosexual practices.

When allowance has been made for a possible selective factor in the survey (that some white-collar men who might otherwise have been drawn into the sample but refrained because of V D. history or infection) the differentiation according to the status of the groups is still very marked.

¹ Some individuals gave a history of infection with more than one disease

The unskilled and manual workers, compared with the white-collar men, show rates of 37.7 against 8.5 per cent. and 3.2 against 1.3 per cent. The fact that the unskilled group contains the highest proportion of single men must be borne in mind in explaining these figures. Other differences of social and economic background, however, also suggest themselves as predisposing factors. Lower educational status and irregularity of work weaken controls which might otherwise be built up. Much of the employment found by unskilled men is of the type (such as work on ships, in logging and construction camps) which keeps them away for long periods after which they return to town with money to spend. White-collar workers on the other hand are more likely to be affected by both steadier occupational environment and more rigid conventions. If the figures of Table 26 are accepted as they stand, the industrial workers would appear to be nearer to the labourers than to the white-collar group in this respect: if the rate shown for the latter is too small, however, it is more nearly an average group.

TRENDS AND TREATMENT

The widespread social repercussions of the venereal diseases have been stressed frequently. It has been said that the evidence as to the economic cost of syphilis will be found hidden in the statistics of mental hospitals and homes for paupers. General paresis, an end result of syphilis, was responsible for over ten per cent. of the total new admissions to mental hospitals in New York State during 1930.¹ The cost of maintenance for the total number of cases of syphilis in the mental hospitals of that state, not including the administrative costs and investment charges, reached the huge figure of \$800,000 annually. Similar conditions obtain elsewhere, with the same effect of heavy expenditures on treatment of the late effects of syphilis. Not only individuals but families suffer, so that dependence as well as hospital charges on the community are part of the cost. Early discovery and preventive work are the immediate and economical ways of reducing the misery and the costs of these major diseases. Whether a rate of 26 per 1,000 is high or low it is of great public health significance, especially when a proportion of it remains untreated in the communicable stage. The question is raised, though it is not answered by the material in the present

¹*Public Health in New York State*, Report of N.Y. State Commission, 1933.

survey, whether the unemployed, more particularly single men, are more likely to expose themselves to infection than others. It is reasonably certain that the likelihood of their getting or seeking treatment is much less for men living at the subsistence level of relief.

Evidence as to the trends in venereal disease does not all point the same way. In England a declining incidence of syphilis but not of gonorrhoea is claimed. The same appears to be true of Canada. While methods of treatment have improved, the social upheavals which followed the War accentuated the spread of the diseases, particularly in Europe.¹ For a number of special reasons, the greatest measure of success in suppressing the evil has been attained in the Scandinavian countries.² An important report is that made periodically on health in the British Army. A remarkable decrease in venereal disease has been brought about since the War, the rate for 1931, for example, being less than half that for 1922. The significance of this result is that it was achieved in a well-disciplined section of society, whose health is under regular supervision, not comparable to people in other walks of life. The unemployed, by contrast, for the early years of the depression were the least well organized members of the community; though as time has gone on, many of them have come more within the reach of a public medical service than ever before. This is only one element, but an important one, in the gains to be derived from a systematic consolidation of the various types of medical provision which now exist for the unemployed in Canada.

The present survey confirmed the need not only by reason of the clinical cases discovered, but with reference also to education on the subject. It became evident, in the course of the examinations, that some of the men with venereal disease placed great dependence on the efficacy of some patent medicine or nostrum which could be secured at a drug-store. In this more than most fields of medicine, the pharmacist is frequently the medical adviser. But in too many cases he may be little more than an untrained clerk. It appears also that the conscientious physician, who emphasizes the need for prolonged treatment and follow-up so as to be on the safe side,

¹Parran "Syphilis from the Epidemiologists' Point of View", *American Journal of Public Health*, Feb. 1932, pp. 141-156.

²Rietz: "The Prevention of Venereal Diseases in Sweden", *American Journal of Public Health*, April 1936.

albert at some cost to his patient, becomes the target for a great deal of adverse criticism. On the other hand, it is clear that to be successful, a preventive service must be more considerate of the individual. Those who, for financial reasons, attend clinics resent the publicity incurred. Especially do they resent having to wait for long periods of time, usually as one of a large number, and having their names called out by someone who appears to them to be an officious orderly.

A real interest was displayed in "blood examinations", and a considerable number, on their own initiative, asked for a Wassermann test. It was noted that a negative report on their blood was taken by many of the men to mean freedom from all venereal infection, when actually a chronic gonorrhoea may still be present.

SUMMARY

A history of venereal disease was given by over a quarter of the unemployed men in the sample examined, i. e. 262 individuals, of whom 235 admitted gonorrhoea, 56 syphilis, and 17 other venereal infections. The 262 men gave histories of 308 infections. Without the use of serological tests, twenty-six cases of previously undiagnosed venereal disease were found; 20 of gonorrhoea, 4 of syphilis, and 2 other; a total of 2.6 per cent. The incidence of the disease itself and a history of disease increased progressively from workers in the better paid to the lowest-paid occupations, which confirms the view that venereal disease is more common where environment is poorest. From the social point of view these findings are among the most important of the survey.

CHAPTER 9

PHYSICAL HANDICAPS

PHYSICAL AND related disabilities are among the most important personal causes of unemployment. Depression and seasonal slackness multiply the total number of persons thrown out of work, but at any time a representative sample of the unemployed is certain to contain some individuals whose work-capacity is low. "Unemployability", however, is a vague term which is frequently misused. In the present survey it was interesting to find out what percentage of the group examined could be thus classed on the basis of specific physical evidence. As indicated below, a number of considerations are raised by the results.

Since one of the general purposes of the study was to observe differences which are related to economic status, a

TABLE 27 HISTORY OF SURGICAL OPERATIONS

Status	Tonsils		Appendix		Hernia		Other	
	No	%	No	%	No	%	No	%
White-collar	22	9.9	13	5.9	2	0.9	16	7.2
Industrial	17	5.0	14	4.1	18	5.2	36	10.5
Unskilled	13	3.0	13	3.0	10	2.3	34	7.8
Total, unemployed group	52	5.2	40	4.0	30	3.0	86	8.6
Total, employed group	81	7.3	20	1.8	32	2.9	53	4.8

review of the medical history of the groups in respect of operations is an important preliminary. This is summarized in Table 27. Clearly, not all operations are of equal gravity and a detailed set of case-histories would be needed to bring out in any complete way the interconnections between health and employability. But the figures are indicative on two general counts, as evidence of more or less satisfactory medical attention and as evidence of greater or less physical strain, liability to accidents, etc., in different occupational fields.

Reference has already been made to the condition of tonsils in general. As with tonsillectomies, it is noticeable that the white-collar men show the highest percentage of appendix

operations. The need for tonsillectomies had apparently been much the same for all the unemployed men taken together as for the employed workers, but the differences between the status groups show the same trend as for appendectomies. On the other hand, the unemployed of skilled or semi-skilled grade were revealed as the most subject to hernia (5.2 per cent., as compared with 2.3 per cent. of the unskilled men and less than one per cent. of Group A). The distribution of the unemployed men who were found to be in need of operative treatment for hernia at the time of the examination also shows a high percentage among the industrial workers:

Group A	6	2.7 per cent.
Group B	14	4.1 per cent.
Group C	10	2.2 per cent.

To some extent the fact that there are more older and fewer young men in Group B than the other categories effects this

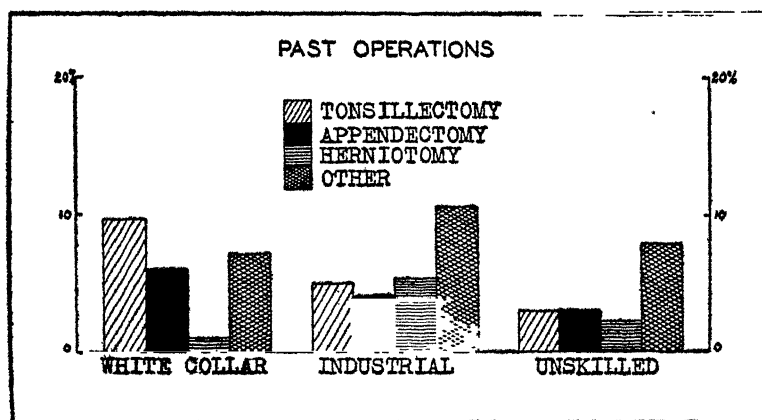


Fig 19. History of operations among the unemployed men

difference. But in spite of the small sample, the indication is probably significant.

The two sets of data are shown together in Fig. 20. Potential hernia or wide inguinal rings are not included in any of the above figures.

This total of cases among the unemployed (30, or three per cent.) who required surgical treatment compared with only thirteen found in the employed industrial workers group.

The hernias were of the inguinal type, with the exception of one which was a large post-operative abdominal hernia. Two cases were recurrences following operations, and two were controlled by trusses. One man, aged 50, had worn a truss for many years to support an undescended testicle; no hernia was present.

A large group of operations of a varied character, but excluding those of minor importance, is covered by the "other" category in Table 28. Gastro-enterostomies,

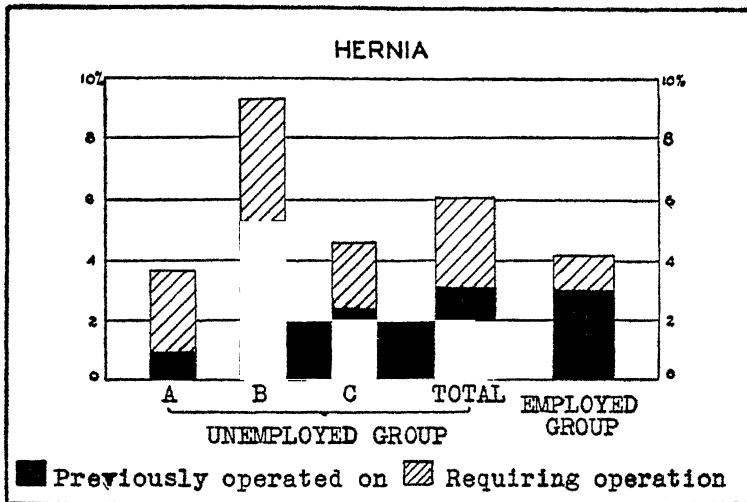


Fig 20 Incidence of hernia among the unemployed men, comparing the proportions who had had herniotomies with those found in need of them.

haemorrhoidectomies, major operations following accidents, such as cerebral decompressions, and fractures where an open operation was performed, are some examples. The highest number was again among the men whose employment had been in industrial fields.

Two cases of appendicitis were diagnosed at the time of examination. In addition to these, sixteen other cases in need of operations (not including hernias) were found, four each in groups A and B, and eight in group C. These operations were considered as minor, with the exception of one case of mastoiditis and one of acute sinusitis. Among the industrial workers, no cases were recorded as requiring operative treatment.

EMPLOYABILITY

The wide range of disabilities found which would affect a man's capacity to work were classified into three main groups. Each case is recorded in the tables by reference to the main disability, since some individuals suffered from more than one handicap. The results are summarized in Table 28. Thirty-one men (3.1 per cent.) were definitely unfit for any kind of work; fifteen, or 1.5 per cent. were seriously incapacitated and fit only for specially adaptable tasks; the largest group, 53 in number or 5.3 per cent., were handicapped in less serious ways. The diagnosis on which these results are based are detailed in the table at the end of the chapter. There are no comparative percentages, since doubtfully employable persons naturally did not figure in the sample of employed workers.

TABLE 28 DISABILITIES AND UNEMPLOYABILITY

Status	I Unemployable		II Seriously Incapacitated		III Other Disabilities	
	No	%	No	%	No	%
White-collar	7	2.1	3	1.3	12	5.4
Industrial	13	3.8	6	1.8	20	5.8
Unskilled	11	2.5	6	1.4	21	4.8
Total unemployed	31	3.1	15	1.5	53	5.3

Some further explanations are important in all these categories. First, when the unemployable cases are classified according to age it is found that 11 of the total of 31 were over sixty; six of these were aged seventy or older. In addition, the unemployable men in the over-sixty age group represented more than a quarter of that group: unemployability among men under sixty on this basis would measure only about 2.2 per cent. Secondly, a more rigid interpretation might have placed a few from Class II into the unemployable class. Two examples were a man with goitre and another with a deformed upper limb. Since both men had been working, for some years, at tasks which it was claimed did not appear to increase their disabilities, they were classed as seriously handicapped. Finally, the general criterion of Class III was that the disabilities present could be corrected or greatly improved by proper treatment. To some extent this

is influenced by occupation. Thus a man with a hernia, if he is a labourer, is severely handicapped, but as the handicap can be corrected by an operation, it is considered as a temporary disability. Since the examinations were made, a number of the men have in fact undergone successful operations or other treatments which would remove them from this "other disabilities" class.

In sum, the proportion found to be physically employable, even taking into account some of the less serious handicaps,

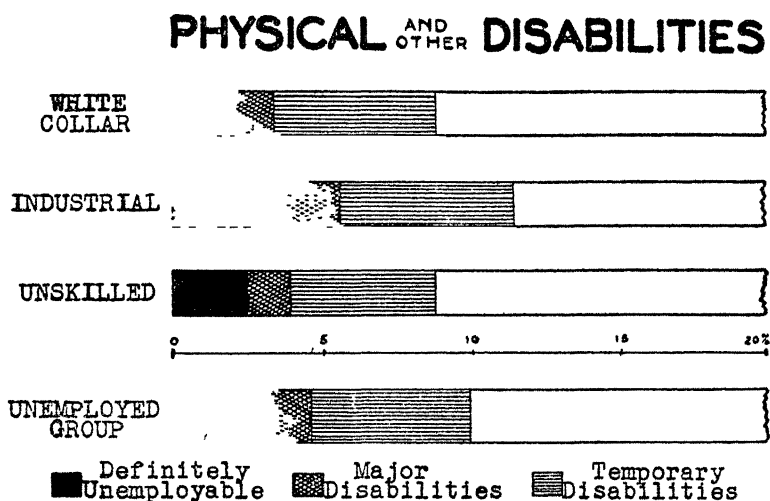


Fig. 21. Proportion of unemployed men in the sample who were classed as definitely unemployable and others with major or temporary disabilities

was about ninety per cent. It is important to remember, however, that "physical defects" may be interpreted much more widely. While only about one-tenth could not have been offered work, on account of their basic physical incapacity, the proportion of men in need of treatments of various kinds, the lack of which was reducing their employment efficiency, is clearly shown to be much higher by the various preceding chapters of this Section. In a comparable survey made by the Employment Stabilization Institute of the University of Minnesota in 1934,¹ the proportion of men with "physical defects likely to reduce efficiency" (which

¹H. S. Diehl. "Physical Condition and Unemployment", *Public Health Reports*, U.S. Public Health Service, Nov. 15, 1935, pp. 1610-1618

included major defects of vision, dentition, serious underweight, etc.) ranged as high as 25 per cent., while an additional 25 to 30 per cent. had "physical defects which might reduce efficiency" of a similarly varied character.

A slightly smaller percentage was found among the skilled and semi-skilled men, but this is probably somewhat exceptional. Age is more clearly an important factor in itself which affects employability. If only men of under sixty had been included in the sample, the unemployable percentage would have been much lower. Put in another way, if pensions were available for older and, particularly, incapacitated workers, one special part of the unemployment problem would be met.

Another indication of the data is that physical handicaps vary in several ways in relation to economic status in regard to liability, their effects, and their degree of satisfactory treatment. Industrial employments involve harder physical strains than many white-collar occupations. The incidence of hernia appears to be a special example of this. Other disabilities might be observed however which show different tendencies. The findings as to faulty foot arches, shown below, are an example. Partly because they are often a

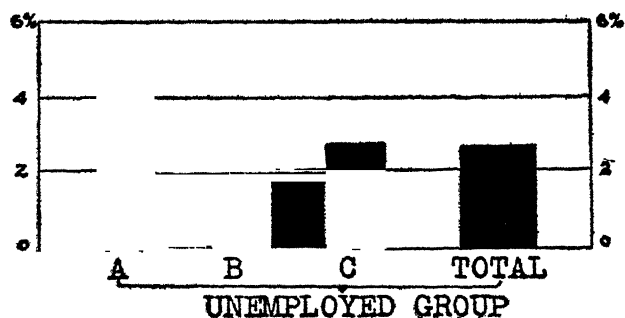


Fig. 22. Proportion of serious cases of flat feet, compared for the three groups of unemployed men.

cause of discomfort rather than of inefficiency, they are not included in the main tables in this chapter: but only those cases of flat feet which were a definite source of annoyance are recorded. Of the total cases noted, the proportion among the clerical and commercial workers is equal to those among the other two groups combined:

Group A	9	4.1 per cent.
Group B	6	1.7 per cent
Group C	12	2.7 per cent.

On the other hand, the significance of a disability is not the same in all occupations. A hernia is serious and even dangerous for a labourer, subject as he is to heavy physical strain. A hernia is of much less importance, under ordinary conditions, to the office worker. The office worker with an extensive carious condition of the teeth, or with infected gums, violates certain ethical standards not considered to be of equal significance among manual labourers. One man was known to have been refused a situation in a departmental store because of his oral sepsis. None the less, the health implications are the same in all groups¹. And obviously minor and even major disabilities may be neglected if income is low or inadequate.

SUMMARY

The unemployed revealed a history of previous surgical operations in twice as many cases as in the employed sample. Noticeably high were the percentages of appendectomies and tonsillectomies among the white-collar workers and of herniotomies among the industrial group. In addition three per cent. of the unemployed men were found to require an operation for hernia, as compared with 1.2 per cent. found in the employees' examinations. 5.3 per cent. of the unemployed had other existing disabilities (as compared with 2.4 per cent.), excluding another 2.7 per cent. with serious cases of fallen foot-arches. Many of this total 8 per cent. of cases were temporary, and could have been corrected by proper treatment. Ten per cent. were incapacitated in greater or less degree, but only about one-third of these (3.1 per cent. of the sample) were rated as definitely unemployable.

¹ Unless it can be established that men in some occupational-status classes are constitutionally stronger than in others. A certain amount of data is already available, e.g., in the health records of insurance companies, factories which have health services, etc., which it would be of much interest to analyze.

TABLE 29 DIAGNOSES OF UNEMPLOYABILITY AND OTHER DISABILITIES

I Unemployable	II Seriously Incapacitated	III Other Disabilities
A <i>White-Collar</i> Tuberculosis Diabetes with arterio-sclerosis Carcinoma ventriculi Blindness Senility Psychoneurosis (2)	Infantile paralysis deformity Alcoholism Chronic arthritis	Severe varices Chronic appendicitis Gastric ulcer Cellulitis Epididymitis Hydrocele Hernia (6)
B. <i>Industrial</i> Tuberculosis (4) Cirrhosis of liver Hemiplegia Carcinoma of lung Myxoedema Crippling arthritis (2) Arteriosclerosis, with incarcerated hernia Cerebral syphilis Feeble-minded	Goitre and cardiac condition Alcoholism Epilepsy Cardio-renal Asthma and cardiac condition Deformity of upper limb from neoplasm	Asthma Severe varices Duodenal ulcer (recurrence) Mercury poisoning Rodent ulcer Acute sinusitis Hernia (14)
C <i>Unskilled and Manual</i> Tuberculosis (3) Diabetes Myocarditis Gout Crippling arthritis Near-blindness Psychosis Psychoneurosis Feeble-minded	Paralysis agitans Partial paralysis Amputation of thigh Epilepsy Chronic osteomyelitis Extreme behaviourism	Asthma Chronic bronchitis Severe varices Discharging glands Chronic appendicitis Duodenal ulcer Tapeworm Epididymitis Mastoiditis Prolapse of rectum Cretinism Hernia (10)

CHAPTER 10

MENTAL HEALTH

As a direct cause, unemployment, if prolonged, has probably a closer relation to mental than to physical health. The present study was not primarily designed to measure the psychology and morale of the unemployed, but it very early became evident that in some degree this was part of every man's problem. Admittedly mental states are not as readily recorded as are physical ones. There are many whose deviations from normal mental health are not sufficient to classify them as abnormal, though to the trained observer, the condition of these individuals is significant. In general a distinction was drawn between serious disorders and less complete tendencies towards depression or lowered morale. A great many who expressed an understandable anxiety to find work eventually, and others who exhibited a resignation to discouraging conditions, were not regarded as abnormal.

About six per cent of the unemployed group were considered to reveal definitely psycho-neurotic trends. How far the stress and strain of unemployment was directly responsible it was impossible to say. The general opinion of recent inquiries appears to be that abnormal mental conditions have appeared only in those who were already unstable in some degree, and that financial worries added to those of a previously sound mind are rarely a direct cause of grave mental disorder.¹ Broadly, it may be assumed that those who are already in a reasonable healthy mental state will adjust satisfactorily to a crisis, whereas for those whose mental health is at fault, the loss of a job and subsequent failure to find another will be the factors which precipitate the individual into a definitely abnormal mental state. The intellectually unfit and the emotionally maladjusted are well represented in any group of unemployed workers. During times of business prosperity, such individuals find employment at the lesser skilled tasks. Very often they are kept working largely out of sympathy either for themselves or for their dependents. When a depression occurs they are naturally the first to be discharged as an economy measure or to protect someone higher up, or

¹Dr. W. T. B. Mitchell, personal communications. Also cf. *Journal of the American Medical Association*, May 13, 1933, p 1553.

to have their light duties handed over to an older or younger employee. This was the case in several instances.

At the initial examination, but chiefly as a result of subsequent observations, it appeared that in the group there were many whose unresolved mental conflicts were such as to cause symptoms of a more serious psycho-neurotic nature. Men with pronounced mental disorders are not likely to be found around relief bureaus and day shelters. But less obvious cases may escape detection for a time, and in the present study six cases—one definitely psychotic, two feeble-minded, and three psycho-neurotic—were discovered. Two of the six cases were in the white-collar group, the others of semi-skilled or unskilled occupational status.

While these few cases are not the basis for the generalization, it is reasonable to expect to find a division between feeble-mindedness, cases of which are likely to be only in the lowest-skilled ranks, and anxiety neuroses which are most likely to be among the upper-grade workers. In the present study more opportunities were available to follow up individuals of white-collar and skilled classes. From these observations it can be said that anxiety states and feelings of inadequacy were more evident among such men on whom the burden of personal and family responsibility weighed more heavily. A feeling of fear, admittedly due to economic insecurity, was not confined to any one group. In general, those who had been previously in fair employments were less vindictive towards society, and they accepted their lot with better grace than did the unskilled who were emphatic and outspoken in their criticisms of existing conditions. In extreme cases the tendency was to blame everybody who was making a living as helping to cause their present distress.

In a few cases, direct physical reasons for mental weakness were present. Eight individuals were classified as chronic alcoholics; two of these giving histories of repeated attacks of delirium tremens. No drug addicts were identified. On one occasion, a middle-aged engineer was found comatose as the result of an overdose of luminol. He had been taking from 5 to 10 grains daily for several months without apparent ill effects. Surprisingly enough, at examination he was mentally alert, and no confirmatory evidence of drug addiction was discovered.

That there is a close association between suicides and economic conditions at all times has been shown by Dublin

in his exhaustive study of this question,¹ which brings out the fact that during a period of business depression the suicide rate rises to a peak, to flatten out again during a period of business recovery. Similar connections have been shown by

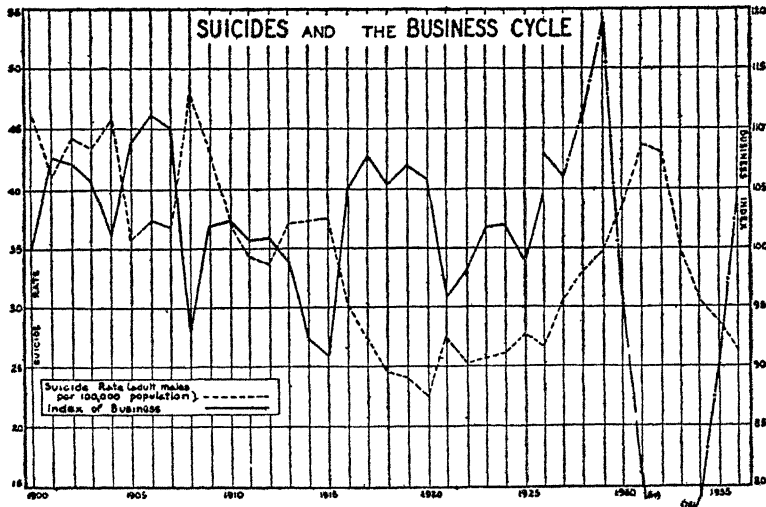


Fig. 23 Fluctuations in the number of suicides in New York City compared with an index of (U.S.A.) business conditions, 1900-1936. Suicide rate relates to males, aged 15 to 69, per 100,000 of the population (Reproduced, and brought up to date, by courtesy of Dr C F Boldvan and the New York City Department of Health Business index from 1926 on (base 1923-5=100) from U.S. Department of Commerce bulletins)

other data (as in Fig. 23), although measurements which distinguish occupations or social status are not available.² Several instances of contemplated or attempted suicide came to the knowledge of the examiner in the present study, not always by the unemployed man himself but also by members of his family, most frequently his wife.³

¹Dublin. *To Be or Not To Be A Study of Suicide* (Smith and Haas, New York, 1933).

²Cf. (a) "The Effects of the Economic Crisis on Mental Disease" Summary of article in *Le Temps*, by Dr Logre, *Journal of American Medical Association*, May 13th, 1933 (b) Thom "Mental Hygiene and the Depression", *Journal of Mental Hygiene*, Oct. 1933 (c) In connection with Fig. 22, cf New York Department of Health *Quarterly Bulletin*, No. 2, 1933, and *New England Journal of Medicine*, Feb. 23, 1933.

³A hotel clerk made two unsuccessful attempts. First, by taking a large number of tablets with a fairly high strychnine content this only succeeded in making him very ill for a few days. A later attempt by exposure to sub-zero weather in clothing previously soaked in ice water was also unavailing.

It became clear from both incidental information and subsidiary observation that the mental and physical ill-health associated with unemployment is even more a family than an individual phenomenon, and also that the repercussions are particularly heavy upon young workers. Among the many factors involved, overcrowding was the most frequently mentioned. To take only one white-collar example, an unemployed office-manager, his wife and their eighteen-year-old daughter made their home in one small room in a basement for several months, a sheet dividing the two beds at night. Under such conditions, overcrowding is even a greater menace to mental than it is to physical health. Several men intimated that the reason they were in Montreal was because conditions in the regions from which they came, where there was no organized relief, were intolerable. But examples of non-economic maladjustment, also appeared. Thus three of the young men contacted in the group, all under twenty, had left home because they could not get along with their fathers.

Observation of some homes of the unemployed also showed evidences of mental strain. The exacting care of foodstuffs, skimping and economizing in all things, and above all the anxieties of parents, whether spoken or implied, led to feelings of insecurity. A particular example worth recording was a case of "hunger-strike" which developed in a girl sixteen years old. She was a brilliant child, leading her class at school. When some extra money came into the home and a little of the old-time cheerfulness was in evidence, the situation cleared up promptly. Of all the sections of the survey of the adult unemployed, this led most clearly from the individual to other members of the family, from the abnormal case to the general maladjustments of large groups.

SUMMARY

Six per cent. of the unemployed men were considered to be showing definite psycho-neurotic trends. Anxiety states and feelings of inadequacy were more generally evident, but particularly noticeable among the higher-grade occupational groups. One definite psychotic, two feeble-minded, and three psycho-neurotics were found, and several instances of attempted or contemplated suicide were learned of. It was evident that the ill effects of lack of work extend to the family in several ways; the cramping conditions of subsistence living also aggravate the pressure on mental health.

PART III
JUVENILES AND ADOLESCENTS

CHAPTER II

THE JUVENILE SAMPLE EXAMINED

THE EXAMINATION of a sample of the important "fourteen to eighteen" group was made possible through the co-operation of the Montreal Boys' Association and Y M C A, which have conducted for their own and other welfare organizations, an annual registration of unemployed boys throughout the depression years. Although this registration was open to all comers, the young men thus contacted were mainly English-speaking. While the youths themselves were in search of jobs, the greater number of them came from families where unemployment in some form had been experienced in the course of the preceding four years.

The medical examinations were conducted at stated intervals, using various welfare centres which were convenient to the boys' homes. The medical examinations were similar to those carried out for the adult group, six to eight being examined at a time. Several of the clinics gave the benefit of their advice when consultation seemed desirable. Suspicious lung conditions, in particular, were referred to one of the tuberculosis clinics where X-rays were taken in doubtful cases. As with the adult group, a real effort was made to have the medical examination regarded as a health "check-up" in order to counteract the natural impression that only the sick need apply. This was achieved fairly well, thanks largely to the guidance of the registration bureau. The applicants came because of their interest in health, and, like the adults, they were in the majority of cases interested in knowing what health rating they received.

The young men in the city who had either been laid off or else had never had the opportunity of steady work after leaving school, were actually to be numbered in the thousands, and three or four hundred was set as the objective for the sample. The examination was voluntary, however, and it was only possible to secure a total of 270. On the other hand, a careful check on the subsidiary information obtained for each individual was maintained, and at least for the English-speaking population an adequate cross-section seems to have been provided.

Two hundred of the boys in the group were either sixteen, seventeen or eighteen, and the average age was a little over seventeen. As might be expected, a much greater proportion were Canadian-born than in the adult samples. Actually only twenty per cent were born elsewhere and of these eleven per cent. were British. Three-quarters of the total were born in Montreal or adjacent areas. The median age at which the boys had left school was 15.3 years, but more than one-fifth of them had left before 14; about ten or twelve per cent continued after 16. The distribution of the grades obtained by the boys and the age at which they left school is shown in Table 30. The average grade attained was VII, but one-sixth of the boys finished school at Grade V or lower.

TABLE 30 AGE AND SCHOOL RECORD OF BOYS IN THE SAMPLE GROUP

Grade Attained	Age at which boy left school								Total	
	11	12	13	14	15	16	17	18	No	P C.
II	1								1	0.4
III		1	2	1					4	1.5
IV		3	5			1			9	3.3
V	1	4	5	7	5	6	1		29	10.7
VI	3	7	13	13	14	10	3		63	23.3
VII	1	1	9	25	26	16	4		82	30.4
VIII			1	9	14	14	5		43	15.9
IX			2	1	6	11	4	3	27	10.0
X					1	2	1	1	5	1.9
XI							4	3	7	2.6
Total No	6	16	37	56	66	60	22	7	270	
P C	2.2	5.9	13.7	20.7	24.5	22.2	8.2	2.6	100	

Grades based on standards of Protestant School Board, Montreal

Few of the boys were seeking further education; it was work they wanted. Many of them, apart from those who had completed the high school grades, considered they had finished with school, having completed grades between VI and IX. A majority had worked at odd jobs and various kinds of unskilled labour. Messengers, garage helpers, and newsboys figured frequently in the occupational histories. Few aspired to office work, or claimed an education sufficient for business life. A very small number were attending a business school or night classes offered by the Y.M.C.A. and other institutions giving free instruction. What was particularly noticeable was that many of the boys whose fathers

were of artisan or white-collar status were drifting along with the rest towards the status of unskilled workers. Unemployment itself was partly the cause; but the meagreness of trade school facilities, apprenticeship opportunities in industry, or of any vocational guidance, was also responsible. Here and there a forceful character appeared, whose ambition was not dulled by many defeats, and who was striving towards the position in life which he felt was bound to open when the depression lifted. Such optimism, however, was rare.

FAMILY BACKGROUNDS

No material was available of a sufficiently comparable character to be used as a direct measure of the medical findings of the youth sample, an assessment of the socio-

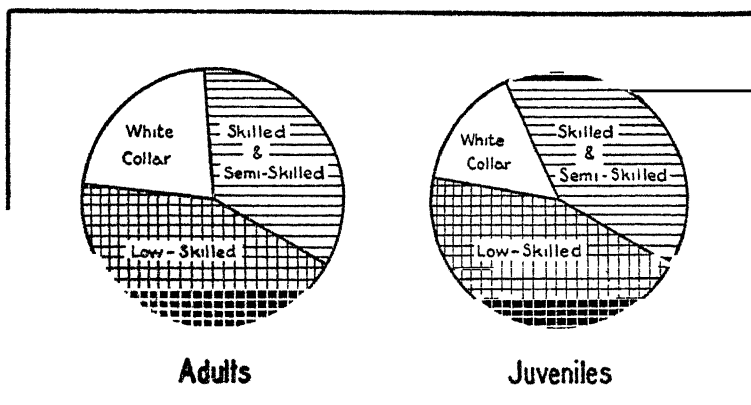


Fig. 24 Occupational status of the adult sample and of the juvenile sample (fathers), compared

economic status of the group was therefore made in greater detail than in the case of the adults

Divided according to the occupational status of the family, the juvenile group compared with the adult group as shown in Fig. 24. The occupational status of the father only is given in Table 31, but it was possible to rank the 37 broken families, where the father was either dead or permanently absent from the home, sufficiently well by the employment of other members of the family. To keep clearer the medical findings, however, the occupational-status division used in succeeding chapters refers only to the youths whose fathers

are in the home. The data for the boys from broken families are shown separately in the second socio-economic classification (e g., p. 105).

TABLE 31 OCCUPATIONAL STATUS OF THE FATHERS
OF THE BOYS EXAMINED

Status	No	%
White-collar	35	13.0
Skilled or semi-skilled	103	38.1
Unskilled	95	35.2
Father dead or separated	37	13.7
Total	270	100

In more than half of the cases, the boy's father was either unemployed or on part-time work at the time of the examination, and unemployment had been experienced in the past by an even larger percentage of the families. A number of

TABLE 32. EMPLOYMENT AND DEPENDENCY STATUS
OF THE FAMILIES

Status of Father	No	%
1. <i>Employed full-time</i>	73	27.0
(a) not on relief	65	24.0
(b) on relief	8	3.0
2. <i>Employed part-time</i>	59	
(a) not on relief	43	15.9
(b) on relief	16	6.0
3. <i>Unemployed</i>	101	
(a) not on relief	26	9.6
(b) on relief	75	27.8
4. <i>Dead, or separated, or absent</i>	37	
(a) not on relief	20	7.4
(b) on relief	17	6.3
Not dependent	154	57.0
On relief	116	43.0
Total	270	100.0

these families had not resorted to relief, however; only 43 per cent. of the families were actually dependent in this way, though some proportion of the others were near the margin. Families on relief directly because of unemployment or underemployment constituted one-third of the group, the remainder being on relief because of inadequate wages, either absolutely or in relation to the size of the families, or the absence of the

adult male wage earner. In general the periods on relief were very much smaller than the total duration of unemployment.

The families from which the boys came were somewhat larger than the average for the English-speaking population, but not unduly so. Between three and four children including the boy examined, was the average, but families of from two to six children were fairly evenly distributed. The following figures offer some evidence that the families of the fathers who were unemployed were somewhat larger than those of the men who had jobs.

AVERAGE NUMBER OF CHILDREN IN TWO GROUPS OF FAMILIES

Number of Children	Families in which the father was	
	Employed	Unemployed
Aged under 14	1 7	1 9
Aged 14 and over	1 9	2 2
Total	3 6	4 1

The total amount of unemployment recorded was greatest among the low-skilled and manual workers, while these men on the whole had the larger families. The general causative factor was thus more likely to be that of occupational status and the social factors allied with it, than some direct relation between size of family and unemployment.

In general the sample, like that of the adults, is of a less fortunate group, measured against the total working population, yet constituting a fairly representative cross-section of jobless youth; including a substantial quota drawn from white-collar families, and more distinctively an English-speaking sample than the adults examined.

NUTRITION

SOME OF THE factors involved in nutrition have already been set out in Chapter 5. As they apply to young people, especially in the age-group covered here, they are likely to be somewhat simpler. Growing boys need adequate food if they are to maintain growth as well as vigour, while the effects of under-nourishment are likely to have more serious repercussions during youth than its occurrence later in life. Further, there is less difference in the types of job which are open to young workers. As in the other parts of the juvenile survey, detailed classification of the boys makes it possible to assess nutrition very closely in relation to economic status.

Using the same standards as for the adults, the nutritional status of 53 per cent. of the boys was judged to be below average, while nearly a third (31 per cent.) were classed as poor or definitely malnourished. (Cf. totals, Table 34.)

There were fewer cases of poor nutrition among the sons of men in the upper occupational groups (white-collar and artisans) as compared with the sons of labourers and with the boys whose fathers were either dead or absent from home. Considered from another angle, only 41 per cent. of unskilled men's sons showed good nutrition and only 46 per cent. of those who had lost their fathers. If those classed as "fair" are grouped with those considered "poor", the same showing appears for the white-collar and industrial groups—about 49 per cent. imperfectly nourished. The other two classes, from broken families or those in which the earnings were the low ones of unskilled workers, showed higher rates—59 and 54 per cent. respectively.

The history of loss of weight was not entirely parallel. Eleven per cent. of the total stated they had lost some weight within a recent period. The distribution of the proportions, however, was 23 per cent. among the white-collar and 19 per cent. among the fatherless groups, as compared with 7.8 and 7.4 per cent. among the industrial and unskilled groups. In part this is affected by the fact that not all of the boys had weighed themselves recently so that equal accuracy could not be vouchsafed. But whether weight had been lost or not

depends also on the existing nutritional state: a white-collar family in which the head loses his job or one in which the father dies may suffer a greater immediate deprivation than one in which nutrition is already low. Whether this is the explanation or not, however, all the percentages are significant

TABLE 33 HISTORY OF LOSS OF WEIGHT

Groups	No	%
<i>Occupational Status</i>		
(a) White-collar	8	22.9
(b) Industrial	8	7.8
(c) Unskilled or manual	7	7.4
(d) Father dead or away	7	18.9
<i>Employment</i>		
(a) Employed full time	3	4.1
(b) Employed part-time	7	11.9
(c) Unemployed	13	13.9
<i>Dependency status</i>		
(a) Not dependent	10	6.5
(b) Receiving relief	20	17.2
Total	30	11.1

inasmuch as no normal growing boy should lose weight. The difference is most marked, moreover, between the boys from relief families and others.

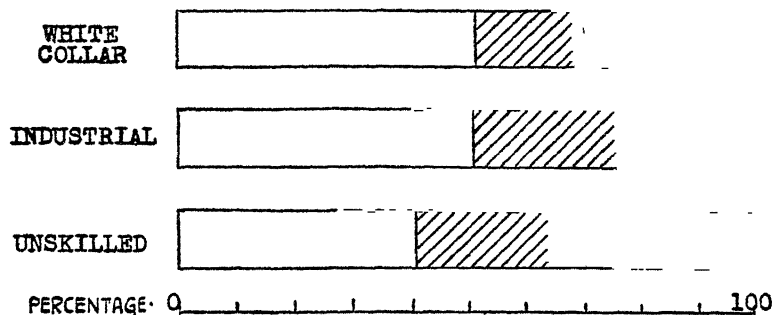
Nutritional conditions among the boys are compared in Table 34 and Fig. 25 by other aspects of status. The outstanding figures are shown by the boys from families hit by unemployment. Only 37.6 of these were rated good as against 52.6 and 56.2 of the boys whose parents had work either full or part-time. The high figure of 31.7 per cent. rated as only fair is significant as it indicates that a real disturbance of the nutritional state has occurred. Some evidence of this, but much less in degree, is observable as the effect of part-time employment compared with the standard of living on full-time earnings. If a home deprived of a father is considered as comparable to a home where unemployment has been prolonged, the results again maintain this significance. In general the impression that there is a direct relationship between unemployment and the nutrition of those living in the homes of the unemployed is substantially confirmed.

These results are most accentuated if the boys whose families were on relief (roughly half of the group) are separated

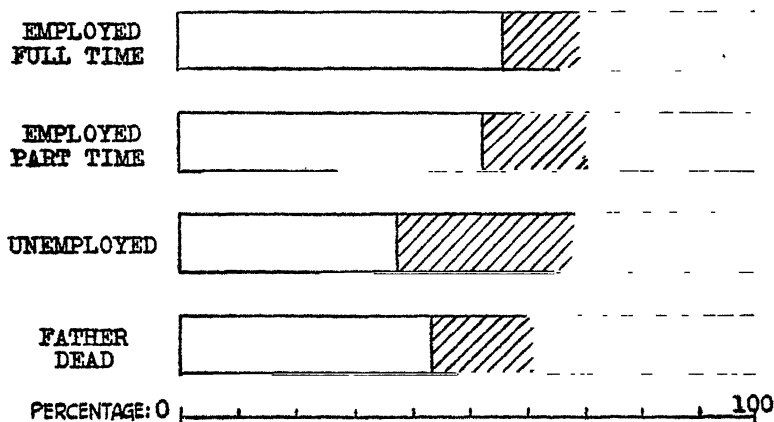
NUTRITION



OCCUPATIONAL STATUS



EMPLOYMENT STATUS OF FATHER



DEPENDENCY STATUS

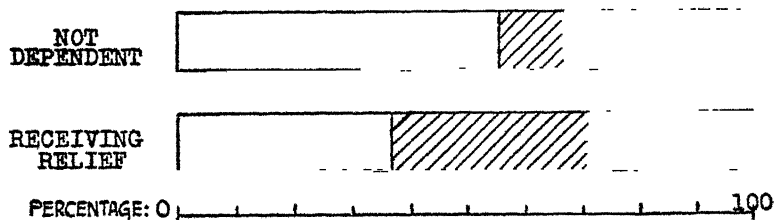


Fig 25. Nutritional status of the group of unemployed boys, distinguished by socio-economic status.

from the rest. Sixty-four per cent. of these boys were in a poor or only fair nutritional state as compared with forty-five per cent. of the others. Actual malnutrition was observed among a somewhat larger proportion of the non-dependent; but the major figure is that of the intermediate group. More than three times as many rated fair among those on relief as among the non-dependent, which may be taken as a decided index of impairment. As may be expected, the closest relation is shown between the figures for the boys with unemployed parents and those on relief, though the latter show a somewhat worse picture.

TABLE 34 NUTRITION GROUPING BY SOCIO-ECONOMIC STATUS OF THE FATHER OR FAMILY

Group	Proportionate Importance of Groups ¹	Nutritional Rating			Total	
		Good	Fair	Poor	No	%
<i>Occupational status</i>						
A. White-collar	13.0	51.5	17.1	31.4	35	100
B. Industrial	38.1	51.4	24.3	24.3	103	100
C. Unskilled or manual	35.2	41.0	23.2	35.8	95	100
D. Father dead or away ²	13.7	45.9	16.2	37.9	37	100
<i>Employment</i>						
a. Employed full time	27.0	56.2	13.7	30.1	73	100
b. Employed part time	21.9	52.6	18.6	28.8	59	100
c. Unemployed	37.4	37.6	31.7	30.7	101	100
d. Father dead or away	13.7	45.9	16.2	37.9	37	100
<i>Dependency status</i>						
a. Not dependent	57.0	55.2	11.7	33.1	154	100
b. Receiving relief	43.0	36.3	35.3	28.4	116	100
Total Number		127	59	84	270	
Per cent.	100	(47.0)	(21.9)	(31.1)		100

The adequacy of relief rations for the younger members of families was brought into question in a number of cases. Many of the boys, from families which had been receiving relief for periods extending to three years and more, complained of or admitted being hungry. At the same time other factors enter into the question, some of which present analytical difficulties. Most important is the fact that poverty means overcrowding, which, in turn, frequently means loss of sleep, insanitary living conditions and irregular domestic arrangements. The exigencies of employment for other members of the family as well as the boys also play a part. One case

¹ This column is repeated in Table 35, but not thereafter

² Group D is the same as Group d in the second classification

was recorded of a boy who got up at four a.m. when his mother rose to go to her work of cleaning an office downtown. Other boys worked late at night, seldom getting home before midnight; these were engaged as messengers for a grocery store, particularly to deliver beer. Unsatisfactory housing, fatigue, and nutrition interact on each other and all of these on the general state of health. It is clear that a fuller enquiry into these important aspects of juvenile life and labour is badly needed.

CHAPTER 13

DENTITION, VISION, AND HEARING

THE CONDITION of the teeth is even more important as measured among young persons than among adults, since the possibilities of remedial attention are greater. It should be expected also that the standards found should be somewhat higher. A similar classification to that used for the dental status of the adult sample was applied to the juvenile group with some modifications. More were classed as "good" and fewer as "fair" among the adults. Teeth with small fillings, in an otherwise healthy mouth, were rated "good"; one or two decayed teeth, with fairly healthy gums, were classed as "fair", while mouths with several carious teeth and unhealthy or infected gums were designated "poor".

Nearly one-third of the boys were found to belong to this last category, while less than half had teeth in good condition. So far as status is concerned, an interesting uniformity in the proportion of good teeth, at about this figure, is shown. The exceptions are among the sons of labourers and other unskilled men (44.3 per cent.) and of workers not fully employed

TABLE 35 DENTITION GROUPING BY SOCIO-ECONOMIC STATUS

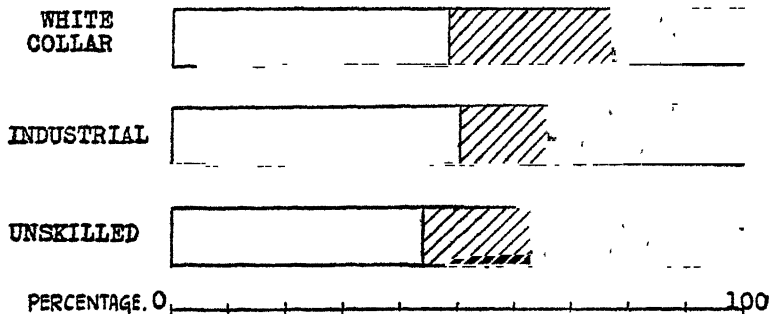
Group	Proportionate Importance of Groups	Good	Fair	Poor	Total	
					No	%
<i>Occupational status</i>						
A. White-collar	13 0	48 5	28 6	22 9	35	100
B. Industrial	38 1	50 5	15 5	34 0	103	100
C. Unskilled or manual	35 2	44 3	18 9	36 8	95	100
D. Father dead ¹	13 7	51 4	21 6	27 0	37	100
<i>Employment status</i>						
a Employed full time	27 0	47 9	23 3	28 8	73	100
b Employed part time	21 9	40 7	16 9	42 4	59	100
c. Unemployed	37 4	51 5	16 8	31 7	101	100
d. Father dead	13 7	51 4	21 6	27 0	37	100
<i>Dependency status</i>						
a Not dependent	57 0	48 1	24 0	27 9	154	100
b Receiving relief	43 0	48 3	12 9	38 8	116	100
Total Number		130	52	88	270	
Per cent.	100.0	48 1	19 3	32 6		100

¹Group D is the same as Group d in the second classification.

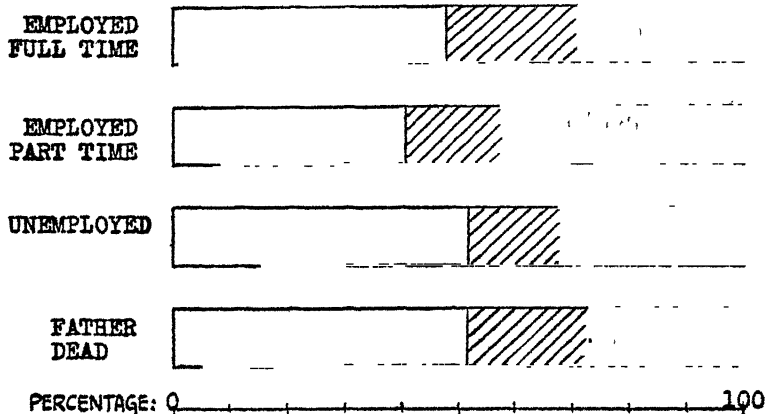
DENTITION



OCCUPATIONAL STATUS



EMPLOYMENT STATUS OF FATHER



DEPENDENCY STATUS

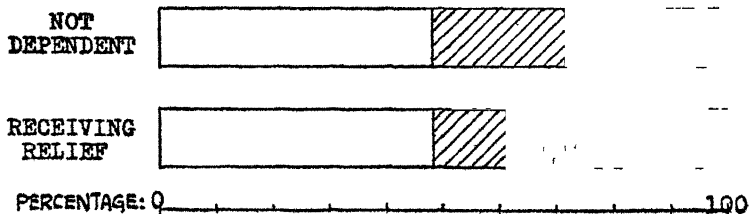


Fig. 26. Condition of teeth among the unemployed boys, distinguished by socio-economic status.

(40.7). These are, of course, much the same individuals, though not entirely so: unskilled work means irregular work, and its influence on medical care is evidently reflected here.

The outstanding differentials are those of poor dentition, most in need of treatment. Proceeding down the economic status scale, the proportion increases from 23 per cent. to 37 per cent. The fact that a major proportion of the unemployed fathers were white-collar or industrial workers helps to explain the sequence by employment status, which at first appears to be divergent. When these elements are brought together by the comparison of relief and non-relief families, the difference is greatest. The proportion of boys with good dentition is the same (48 per cent.), but 39 per cent. from families on relief, as compared with 28 per cent. from families able to keep from resorting to relief, had seriously impaired teeth.

It is necessary to add in explanation of the findings that through the clinics of the registration bureau and the support given during the previous months by a local service club, many of the younger members of unemployed families had received dental care. None the less, the examination revealed a real need for extractions and reparative work in fully one-third of the whole group. At a conservative estimate, twenty per cent. might, with preventive work, have been transferred from the "fair" group into the larger group with good teeth.

VISION

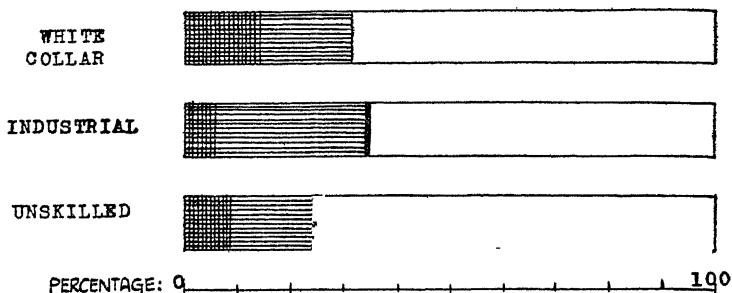
Apparently there are few disabilities which the individual neglects, ignores, or considers to be of less consequence than defective vision. In days of prosperity, among all sorts and conditions of people, a certain reluctance is shown to the wearing of glasses. None are more prone to neglect eyesight than juveniles and adolescents unless they are in receipt of proper advice. Many accept their defective vision as a normal occurrence until an accident or constitutional symptoms force attention to the simple but important question of glasses. But the cost of eye examinations and the securing of glasses is of course the heaviest deterrent factor among the unemployed and those struggling to keep from going on relief.

In the sample group examined, thirty per cent. of the boys had defective vision. Probably this is not very far above average, but the significant figure is that nearly seventy per

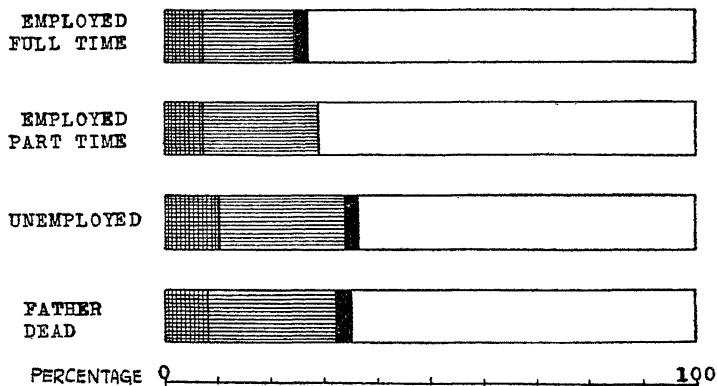
VISION

DEFECTIVE VISION {  CORRECTED  UNCORRECTED OTHER DEFECTS 

OCCUPATIONAL STATUS



EMPLOYMENT STATUS OF FATHER



DEPENDENCY STATUS

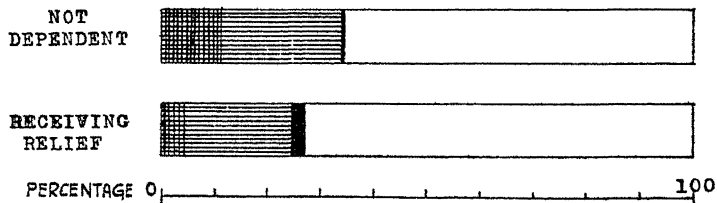


Fig. 27. Incidence of visual defects, and numbers needing glasses, among the unemployed boys, distinguished by socio-economic status.

cent of these cases were unremedied, i.e., only thirty per cent. of those who needed glasses had them.

An interesting differentiation of eye defects was revealed. There was a smaller percentage of eyesight weakness among the sons of the unskilled than in the two higher occupational groups; though more from the white-collar class had the necessary glasses than others. There would appear to be some suggestion that primary eye-strength varies more than the soundness of teeth or, perhaps more plausibly, that the amount of strain to which the eyes are subjected varies as between economic classes. On the other hand, a high percentage of defects existed among the boys whose fathers were unemployed (36 per cent. as against 29 and 26 per cent.). The latter also were less satisfactorily supplied with glasses. The children of part-time workers, skilled or unskilled, were the worst off in this respect.

TABLE 36 VISION AND EYE DEFECTS GROUPING BY SOCIO-ECONOMIC STATUS

Group	Defective Vision	Other Defects	Total Defects		Defects Uncorrected	
	No	No	No	% ¹	No.	% ²
<i>Occupational status</i>						
A White-collar	11	0	11	31.4	6	54.5
B Industrial	35	1	36	35.0	29	80.6
C Unskilled or manual	23	2	25	26.3	15	60.0
<i>Employment status</i>						
a Employed full time	18	1	19	26.0	13	68.4
b Employed part time	17	0	17	28.8	13	76.5
c Unemployed	34	2	36	35.6	24	66.7
d. Father dead	12	1	13	35.1	9	69.2
<i>Dependency status</i>						
a Not dependent	52	1	53	34.4	35	66.0
b Receiving relief	29	3	32	27.6	24	75.0
Total	81	4	85	31.5	59	69.4

Other eye defects were four in number, two having lost one eye and two showing an extreme degree of strabismus. Three of these were from relief families. The final classification of relief and non-relief cases again summarizes the chief showing of more primary visual defects, but better attention to them, among the higher-status groups.

¹ Percentage of total in each group

² Percentage of cases with visual defects

HEARING

Only a few of the youths had defective hearing. Sixteen or approximately 6 per cent. were found by elementary determination, an audiometer not being available. Six others had chronic discharging ears, making a total with aural defects of 8 per cent. Most of those with defective hearing gave a history of prolonged ear trouble. Four had had mastoid operations following an acute communicable disease. Those with discharging ears gave histories of previous trouble with the other ear which resulted in partial deafness.

No obvious indications were given in the examination as to whether these defects were relatable to economic status. The incidence of both types of defect was equal as between relief and non-relief families; but these and the other subgroup figures are too small to support any general inferences.

TABLE 37. HEARING: GROUPING BY SOCIO-ECONOMIC STATUS

Group	Defective Hearing		Discharging Ears		Total	
	No	%	No	%	No.	%
<i>Occupational status</i>						
A. White-collar	3	8.6	1	2.9	4	11.4
B. Industrial	7	6.8	2	1.9	9	8.7
C. Unskilled or manual	3	3.2	2	2.1	5	5.3
<i>Employment status</i>						
a. Employed full time	4	5.5	1	1.4	5	6.8
b. Employed part time	2	3.4	1	1.7	3	5.1
c. Unemployed	7	6.9	3	3.0	10	9.9
d. Father dead	3	8.1	1	2.7	4	10.8
<i>Dependency status</i>						
a. Not dependent	10	6.5	3	1.9	13	8.4
b. Receiving relief	6	5.2	3	2.6	9	7.8
Total	16	5.9	6	2.2	22	8.1

CHAPTER 14

CARDIO-VASCULAR, RESPIRATORY, AND RELATED CONDITIONS

THE JUVENILE survey disclosed that twenty-three individuals in the sample group were suffering from cardio-vascular defects, a relatively high rate (8.5 per cent.), which was found to be connected with other medical history or actual needs evidenced as the examination proceeded. Eleven of the twenty-three were cases of high blood pressure (4.1 per cent.), five of low blood pressure. One of the cases of hypertension had such other symptoms as permitted a diagnosis of chronic nephritis. The causes of hypertension were ill-defined. The seven other cases, however, all presented some fairly definite evidence of heart disease, as shown by cardiac enlargement, murmurs or arrhythmiae, accompanied by cardiac distress or shortness of breath.

It is unfortunate that the incidence of these disabilities among unemployed boys cannot be compared with that for a representative employed group, as the status-indications given by the existing data are neutral or negative. While the rate appears highest in the lowest-income families (where the father was dead or an unskilled worker) fewer of the cases here and for other related factors are recorded among the families who were on relief at the time of the examination. It is probably best to regard the figures for the total group as the principally significant ones.

RHEUMATIC FEVER AND RELATED HISTORIES

The high percentage giving a history of rheumatic fever, or of the rheumatic complex, which includes chorea and "growing pains", is worthy of note at this point. Fifty-nine of the 270 boys, or nearly 22 per cent., gave such a history. In general this incidence was fairly uniform on all classes, if allowance is made for the fact that in the lower socio-economic groups, rheumatism may not have been recognized as such or the illness have received the care of a physician.

TABLE 38 CARDIO-VASCULAR DEFECTS, AND HISTORY OF RHEUMATIC FEVER

Grouping by Socio-Economic Status

Group	Hyper-tension		Hypo-tension		Other C-V Defects		Total		History of Rheumatic Fever*	
	No.	%	No.	%	No.	%	No.	%	No.	%
<i>Occupational status</i>										
A White-collar	3	8.6					3	8.6	8	22.9
B. Industrial	2	1.9	1	1.0	2	1.9	5	4.8	23	22.3
C Unskilled or manual	3	3.2	3	3.2	4	4.2	10	10.5	20	21.1
<i>Employment status</i>										
a Employed full time	2	2.7	2	2.7	3	4.1	7	9.6	20	27.4
b Employed part time	2	3.4			1	1.7	3	5.1	12	20.3
c. Unemployed	4	4.0	2	2.0	2	2.0	8	7.9	19	18.8
d Father dead	3	8.1	1	2.7	1	2.7	5	13.5	8	21.6
<i>Dependency status</i>										
a. Not dependent	8	5.2	2	1.3	5	3.3	15	9.8	38	24.7
b. Receiving relief	3	1.9	3	1.9	2	1.3	8	5.1	21	18.1
Total	11	4.1	5	1.9	7	2.6	23	8.5	59	21.9

*Including chorea and "growing pains".

As is shown later, a heavy proportion of the juveniles had unhealthy tonsils. If these bear any relationship to rheumatic infections, the large number giving a history of the rheumatic complex is a serious finding. The possible relationship between the history of rheumatic fever, and the high percentages of infected and removed tonsils must be considered as causative factors in the high incidence of cardio-vascular defects found.

RESPIRATORY ORGANS

As the juvenile examinations were conducted during the winter, a high percentage of upper respiratory infections were to be expected. Actually twenty cases, or 7.4 per cent., were found with head colds, acute pharyngitis, etc. The highest proportion was among the boys from unskilled workers' families. Fifteen mouth-breathers were noted, the obstruction to nasal breathing being due to adenoids, deviated septa, or polypi. In one case, the trouble arose from an old fracture

CARDIO-VASCULAR DEFECTS

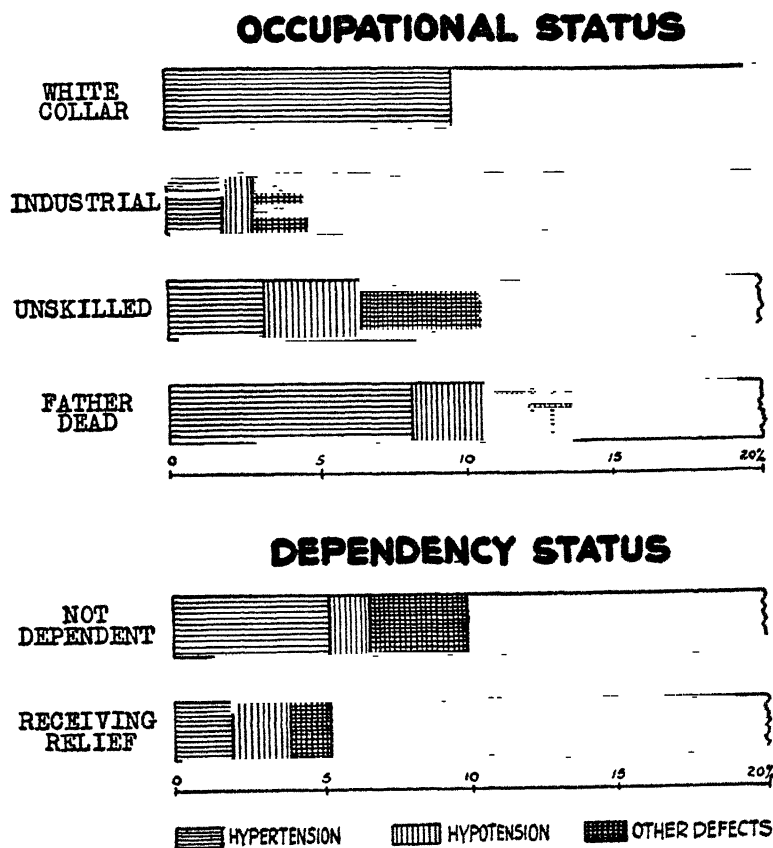


Fig. 28 Cardio-vascular defects revealed by the juvenile sample

of the nasal bones. This total represents 6 per cent. of the sample. Only one of these boys was from a white-collar family.

HISTORY OF RHEUMATIC FEVER, etc.

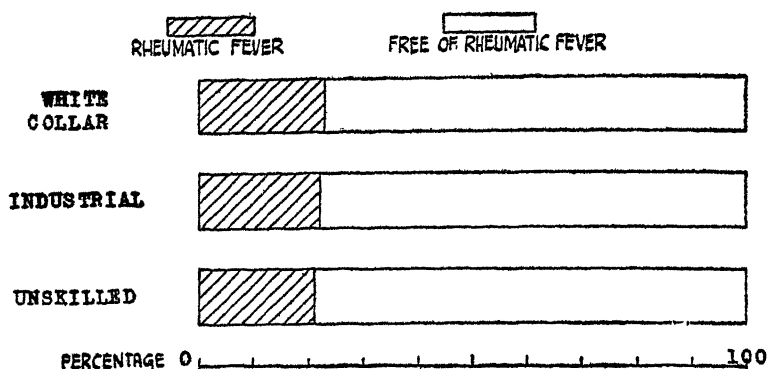
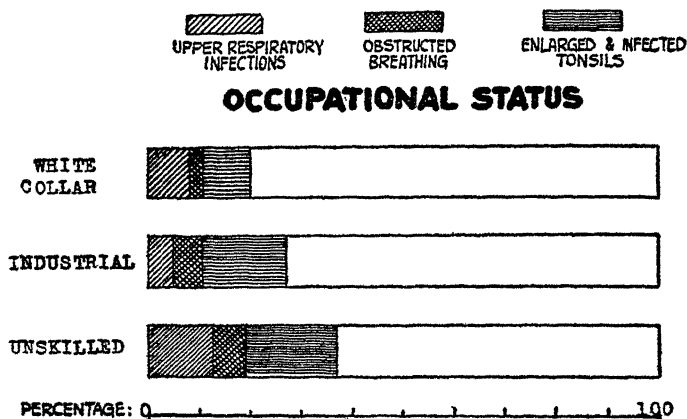


Fig 29 History of rheumatic fever in the juvenile unemployed boys sample

NOSE, THROAT AND RESPIRATORY DEFECTS



DEPENDENCY STATUS

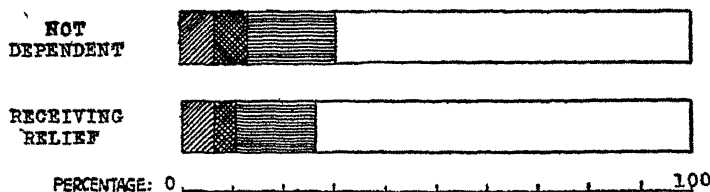


Fig 30. Incidence of nose, throat, and respiratory defects in the juvenile sample.

The outstanding finding is that forty-four boys had enlarged and infected tonsils which were in need of attention. Once again the great majority were the sons of industrial and unskilled workers. The rate for the group is high at over 16 per cent., in view of the fact that 41 per cent. of the total in the sample had had past operative treatment. (Cf. Table 40, Chapter 15.) Fig. 31 shows both sets of data together for the socio-economic groups. It is evident that more than one set of causal factors is reflected in these figures. The healthiest conditions appear among the youths from white-collar families, among whom also a high proportion had already received operative care. But for the size of the numbers concerned, the histories of tonsillectomy are not markedly different. If there is any relation between existing infection and past care or neglect, it is deducible only for Group C. The highest proportion both of tonsillectomies and of existing infection (51.4 and 18.9 per cent) is shown among the boys whose fathers were not living: if these are the boys who, in some respects, are most likely to suffer from neglect, however, it is also the broken family which is most likely to come to the care of social agencies, at least for service and advice if not for relief. And in general, tonsillar operations among children of the present generation are so generally accepted that medical examination would certainly include attention to them.

All of these findings suggest fields in which socio-medical case studies would be valuable in throwing further light on a number of involved tendencies. From the present study, the main points to be emphasized in recapitulation are the high rates for some important ailments; a 22 per cent. history of the rheumatic complex, 8.5 per cent. with cardio-vascular weakness, 16 per cent. with infected tonsils in spite of a high proportion of removals.

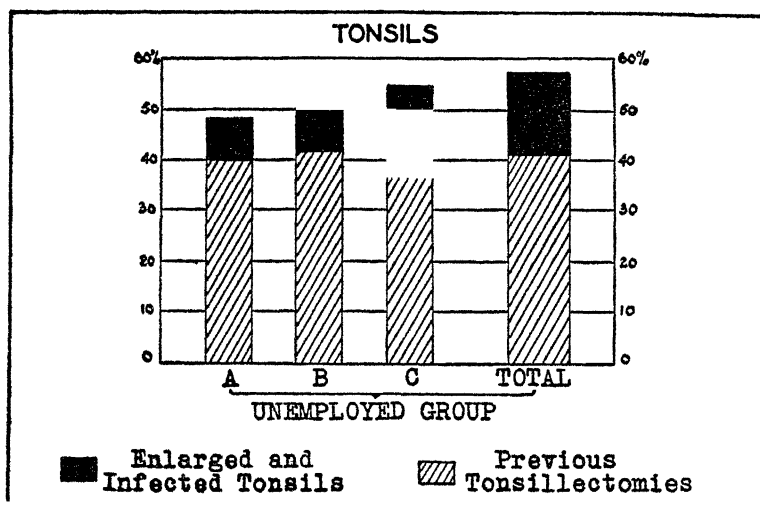


Fig 31 Percentages in the occupational status groups of the juvenile unemployed sample, of boys who had enlarged and infected tonsils, compared with percentages of tonsillectomies in each group

TABLE 39. NOSE, THROAT AND RESPIRATORY DEFECTS GROUPING BY SOCIO-ECONOMIC STATUS

Group	Upper Respiratory Infections		Obstructed Breathing		Infected or Enlarged Tonsils		Total	
	No	%	No	%	No	%	No	%
<i>Occupational status</i>								
A. White-collar	3	8.6	1	2.9	3	8.6	7	20.1
B. Industrial	5	4.9	6	5.8	17	16.5	28	27.2
C. Unskilled or manual	12	12.6	6	6.3	17	17.9	35	36.8
<i>Employment status</i>								
a. Employed full time	5	6.8	3	4.1	10	13.7	18	24.6
b. Employed part time	5	8.5	5	8.5	8	13.6	18	30.6
c. Unemployed	10	9.9	5	5.0	19	18.8	34	33.7
d. Father dead			2	5.4	7	18.9	9	24.3
<i>Dependency status</i>								
a. Not dependent	10	6.5	10	6.5	26	16.9	46	29.9
b. Receiving relief	10	6.5	5	4.3	18	15.5	33	26.3
Total	20	7.4	15	5.6	44	16.3	79	29.3

CHAPTER 15

HANDICAPS AND EMPLOYABILITY

PHYSICAL AILMENTS and defects may not necessarily affect a youth's skill or capacity for work, but many are likely to turn the balance against him when he interviews a prospective employer. A considerable range of handicaps other than those covered in the previous sections was disclosed among the sample of unemployed boys, many of which would undoubtedly have the influence suggested above. Yet only a very few could be classed as definitely unemployable. Sympathetic training, employment guidance and reasonable medical supervision during their early years of work were the main needs of most of them.¹

TABLE 40 HISTORY OF OPERATIONS IN THE JUVENILE SAMPLE,
COMPARED BY SOCIO-ECONOMIC STATUS OF THE FATHERS

Group	Tonsillectomy		Appendectomy		Herniotomy		Other		Total	
	No	%	No	%	No	%	No	%	No	%
A White-collar	14	40.0	1	2.9			1	2.9	16	45.7
B Industrial	43	41.7	5	4.9	1	1.0	6	5.8	55	53.4
C Unskilled	35	36.8	4	4.2			6	6.3	45	47.4
D. Father dead	19	51.4	2	5.4	1	2.7	4	10.8	26	70.3
Total	111	41.1	12	4.4	2	0.7	17	6.3	142	52.6

The history of operations, which among adults has a substantial bearing on the matter of employability, does not necessarily carry the same implications for adolescents. While at first sight the total rate of 53 per cent. appears extraordinarily high, by far the greater number (111 out of the 142 operations recorded) are tonsillectomies. Appendectomies account for another 12, or 4.4 per cent. The distribution of these and other operations is shown in Table 40 with the main findings adequately summarized in Fig. 32. The non-specified group of operations includes several mastoidectomies, at least eight operations for repair of herniae, and

¹All those with remediable conditions were recommended, following the examinations, to various hospital and other clinics convenient to the place of examination or the home, and all were courteously received

operations for empyema, fractures of the skull, and some minor surgery. If appendectomies and herniotomies, but not tonsil operations are included, the total incidence is 11.4 per cent. or above one in nine. The rates for the boys from manual workers' families do not diverge very much from this, but a much lower percentage in the white-collar group (5.8) had required these operations.

EXISTING HANDICAPS

Physical and other handicaps found untreated in the group are of more significance. While some are less serious than others, the percentage of all defects among the boys as a

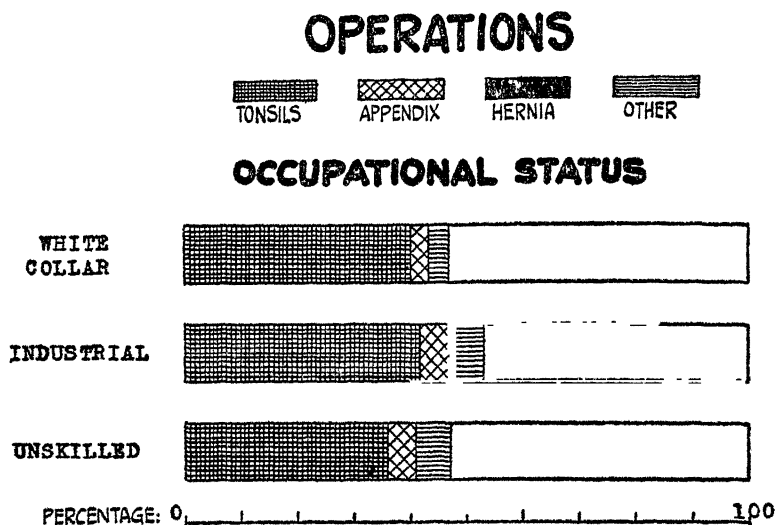


Fig. 32 History of operations in the main status groups of the unemployed boys' sample.

whole is surprisingly high—over 22 per cent. Abnormalities of posture, factors affecting the ability to stand for long periods, etc., were the most numerous. There were thirteen cases of general posture deformity and four others which were specifically attributable. Two were the results of poliomyelitis, one was a birth palsy, and one a spastic paralysis following an obscure illness. Eight cases of unilateral inguinal hernia, three varicoceles and one hydrocele were found. Another eight boys suffered from an extreme degree

of fallen arches. If all these cases are taken together they represent an incidence of 13 per cent.

Pulmonary and respiratory handicaps are second in importance. Five boys had chronic bronchitis and one bronchial asthma. No active tuberculosis was found in the clinical examination, though in eight cases tuberculous

TABLE 41 PHYSICAL AND OTHER HANDICAPS
COMPARISON FOR GROUPS CLASSIFIED BY
STATUS OF FATHER

Group	No	%
<i>Occupational status</i>		
White-collar	11	31.4
Industrial	22	21.3
Unskilled	19	20.0
<i>Employment status</i>		
Fully employed	15	20.5
Employed part time	12	20.3
Unemployed	25	24.8
Father dead or away	8	21.6
<i>Dependency status</i>		
Not dependent	29	18.8
On relief	31	26.8
Total	60	22.2

conditions were suspected. It was possible to refer these boys to hospital for X-ray examinations and a healed lesion was discovered in one case. One dry pleurisy was deemed tuberculous in origin.

One case of each of the following less common defects was recorded: chronic nephritis, severe bunions, serious speech impediment, and pituitary disturbance with tremendous overweight. Venereal disease was not found, nor was a history of infection obtained in any case. The adolescent form of acne was common, although only one severe case was found. One case of eczema, serious enough to constitute at least a temporary handicap, was seen. The details are listed in Table 42. Urinary findings which are not included in the latter, were as follows: three of the group showed albumen in sufficient quantity, on repeated examination, to be considered significant. In only one was a diagnosis of nephritis made, as the other two were sequelae of recent acute upper respiratory infections, and both were found negative on subsequent examination. Sugar was found in the urine of four, but all proved to be cases of renal glycosuria.

While the summary rates (Table 41) suggest a much higher incidence of miscellaneous handicaps (31 per cent.) among the boys from white-collar families, this is to be discounted in view of the small figures on which the percentage is based. The difference between those on relief and the others (27 per cent. as against 19 per cent.) probably reflects conditions of income

TABLE 42 DETAIL OF PHYSICAL AND OTHER HANDICAPS

Ailment	White-collar	Industrial	Unskilled	Father Absent
Acne vulgaris (severe)				1
Eczema			1	
Chronic bronchitis, bronchial asthma	1	2		1
Laryngitis	1			
Pleurisy	1			
Tuberculosis (healed)	1			
Hernia		3	4	1
Hydrocaele		1		
Chronic nephritis		1		
Flat feet	1	4	3	
Varicocaele	1	1	1	
Severe bunions		1		
Postural deformity	3	4	5	1
Congenital deformity		1	1	
Deformity from poliomyelitis		1		1
Spastic paralysis	1			
Overweight, pituitary disturbance, etc.	1	2	1	2
Serious speech impediment			1	
Potential mental disorders		1	2	
Total	11	22	19	8

and environment more representatively. The principal showing is that the rates remain at about one-fifth throughout the various sub-groupings which are possible. None the less, it was clear from the examination that, so far as physical factors alone were concerned, the sample surveyed was in the great majority a group of normally employable boys. Three only were considered to be fit only for limited work and two as definitely unfit for any normal employment at all.

MENTAL HEALTH

The handicaps of psychology and morale constitute the important qualification to the conclusion above. The demoralizing effect of idleness and the feeling of many of the boys that they "had no future" were apparent in various degrees. Superficially, a carefree attitude was common to

most of the group. But the older boys who had been unemployed most, and those from families who had been on relief for long periods, particularly showed this as a lack of feeling of responsibility.

A weakened concern with the realities of life, either consciously or unconsciously—as a psychological “escape”—showed itself in various ways. Many had slipped gradually into accepting dependence, after giving up a fruitless search for work. As in the adult group, there was plenty of evidence of a changed attitude towards society; in various guises this was held responsible by most of the group for their unsatisfactory condition. A few retained their belief in education and an eventual career if they were “given a break”. At the other extreme there were cases of potential mental disorders. Three were so classified. Two had been “problem” boys, having already spent some time in reform schools. One, the son of a widow, was a withdrawn individual who desired neither friends nor work, and was clearly in danger of becoming a permanent unemployable.

The primary scope of the present study was of physical conditions, and a detailed study of mental health was not possible. Contacts with the boys were relatively brief, and sufficient concrete data could not be secured to establish the interrelations of cause and effect. But mental health cannot be ignored. The net impression from the examination may be summed up in the statement that not physical defect alone, but unemployment itself creates unemployability.

PART IV
THE FAMILY

CHAPTER 16

SOME SOCIAL AGENCY CASES

IN THE surveys of both adults and juveniles which have been described, it has been apparent at many points how continuously the conditions of health and unemployment among individuals reach back to the family, whether as cause or effect or both. The samples in this book would not illustrate the total social situation unless some were included which dealt with the family itself as a unit. It is possible to do this by making use of some very relevant materials placed at the disposal of this study by the Family Welfare Association. This agency is the largest unit in the Montreal federation of Protestant and non-sectarian charitable organizations.¹ It carries the bulk of the general cases of need due to insufficient means (i.e., as compared with special cases such as orphanhood, legal problems, special health services, etc.) and it is, of course, concerned with families as a whole, rather than individuals. So far as the care of the unemployed is concerned, the definition of responsibility as between the Association and the Unemployment Relief Commission of the City is of first-rate importance. This has in fact varied over an extremely wide range in the course of the depression, and because of the lessons to be derived which bear on public administration in social welfare matters, this history is of strong interest in itself. It will be sufficient here, however, to indicate the relations between private and public arrangements for the unemployed at the points in the following text where this is most appropriate.

In the winter of 1936-37 (for which the month of January is taken as representative) there were around 1,200 unemployment cases on the rolls of the Family Welfare Association.² Because the purpose of the enquiry was to measure how far the problems of health were correlated with those of unemployment, no families were included in the present survey in which a cause other than unemployment was the major

¹ Cf. footnote on p. 38.

² The total number of non-Catholic, non-Jewish families within the same Montreal area who may be roughly defined as of "ordinary wage-earner" status, can only be estimated within wide limits as about 25,000.

reason for their dependency. Thus, 248 families which were dependent primarily due to old age, were not included. The figure of 1,200 also excludes 214 special "unemployment adjustment" cases (i.e., families accepted by the City as eligible for unemployment relief but carried by the Association until they finally receive city relief allowances).

It is often asked how many of the families carried by social agencies are unemployment cases. The proportion varies, of course, with a number of factors, administrative as

TABLE 43. UNEMPLOYMENT IN THE CASE-LOAD OF THE
FAMILY WELFARE ASSOCIATION
(Montreal, January 1937)

District	Total Cases (Families)	Unemployment Cases		Numbers Unemployed in These Families	
		No.	%	Heads	Others
Uptown	174	97	55.7	83	29
West	128	71	55.5	66	16
North	213	72	33.8	63	16
Rosemount	154	83	53.9	75	19
East	99	55	55.6	51	37
South	191	92	48.2	74	25
Verdun	232	121	52.2	112	59
Total	1,191	591	50.0	524	201

well as economic, and it is lower in years of active business. At this date, when a city relief system was in operation on a large scale, the proportion was still one-half. (Table 43.) In 524 out of the 591 families thus comprised, the male head was out of work. In the rest, other working members of the family had lost their jobs: some of these were "broken families" in which the normal breadwinner was the mother or one or more of the children. (Widows with small children, among whom none were old enough to be a wage-earner, were not included in the cases recorded). In a few families, more than one earner was unemployed. All included, the family conditions summarized below are measured for a total of 725 unemployed persons. The amounts of unemployment experienced by them ranged from a few months to the whole period of the depression.

These families may be considered as a representative cross-section of the lowest income groups in the non-French-speaking community of Montreal. As Table 43 shows, they are

distributed over all quarters of the city, and with the exception of two districts, the proportion of unemployment in the case-load is noticeably similar.

For each district the social workers in charge were asked to make an appraisal of a number of leading conditions of health, housing, etc., and the effects of unemployment. Since each family is continuously visited by a trained social worker, whose function is to secure a full diagnosis of its problems and to win the confidence of its members, this record is not merely a superficial one. It embodies the first-hand knowledge of home backgrounds which was lacking in the three survey-samples described in the previous pages.

The facts of primary medical significance are shown in Table 44. In 29 per cent. of the families there was some major illness. This was taken as meaning illness of a definitely disabling character: minor illnesses which, while less serious in consequence for the family, may still make some demands on the family budget, would raise the percentage to nearer 40 per cent.—at a very conservative figure, to 33. This is of course a particularly heavy liability for the larger families.

TABLE 44. HEALTH CONDITIONS AMONG UNEMPLOYED FAMILIES
(Montreal Family Welfare Association, Jan. 1937)

District	Total Unemployment Cases	Major Illness		Under- nutrition ¹		Bad Housing		Lack of Clothing	
		No	%	No.	%	No	%	No.	%
Uptown	97	50	51.5	4	4.1	20	20.6	10	10.3
West	71	13	18.3	24	33.8	8	11.3	5	7.0
North	72	21	29.2	17	23.6	13	18.1	1	1.4
Rosemount	83	39	47.0	9	10.8	11	13.3	3	3.6
East	55	3	5.5	25	45.6	11	2.0	13	23.6
South	92	21	22.8	8	8.7	27	29.3	4	4.3
Verdun	121	23	19.0	28	23.1	15	12.4	4	3.3
Total	591	170	28.8	115	19.5	106	17.9	40	6.8

A heavy rate of sickness may perhaps be expected. It is often a serious illness which brings to the care of an agency a family which might otherwise have remained off its rolls, or, in other words, there is a "natural selection" towards the charitable agencies of cases with sickness in the family. A second index is more disconcerting. During the month

¹Ratio of individual cases to families. (Other columns show percentage of families.)

concerned, 115 children from these families were reported as suffering from malnutrition (the majority by the school doctor). This average of one case to every five families, it should be noted, does not refer simply to cases of insufficient food, but to symptoms of general deficiency of nutrition.¹ On the base of the child-population of the group alone, this represents a rate of about 8 per cent., or one child in every twelve.

Some of the differences between areas are of considerable interest. The Uptown and South districts, in which the malnutrition rates are lowest, are parts of the city in which settlements and other welfare agencies are most numerous, in which also schools with many pupils from low-income families have provided milk, and sometimes meals, free. In the West and East sections, where the rates are highest, there are not only fewer agencies but the contacts of the Family Welfare Association with their cases are more casual and less continuous. The high percentages of malnutrition here are in contrast to the low rate in Rosemount, a relatively settled and stable district where many of the families have been known to the Association over long periods. Verdun and the North district are more or less intermediate between the two extremes. The broad correlation which appears between low malnutrition incidence and high illness rates, seen in this context, is not accidental, for it is when there is illness in the family that agencies are most likely to supplement food allowances or supply special diets. The malnutrition rate shown among the Eastern group of Protestant families hit by unemployment—nearly one case to every second family—is so high as to call for special remark.

The figures for bad housing refer not only to insanitary, badly-lighted and constructed dwellings, but to overcrowding. Overcrowding cases include families living in one or two rooms, and others who have "doubled up" (and sometimes "trebled up") in a single dwelling; apart altogether from other considerations, cleanliness becomes hard if not impossible under such conditions, and the spread of communicable ailments is immeasurably easier. The cases of bad housing in the primary or structural sense are listed where health is menaced by inadequate ventilation, lack of access to sunlight, difficulties of heating and protection against damp, and

¹In the corresponding case-load for August 1937 (which was reviewed again to secure data for Fig. 33), there were four cases of rickets and one of scurvy.

exceptional contamination hazard through dirty yards and passages, garbage accumulations, etc. If higher standards of housing adequacy were applied the percentages could be doubled. (Cf. Fig. 33.)

Lack of proper clothing, especially in winter, may be an important supplementary cause of lowered resistance to illness, though it comes chiefly to the attention of social agencies in another form, namely that children are not able to go to school or to clinics because they have insufficient clothes or hopelessly worn-out ones. Clothing has always been an item whose importance in the relief budget is easily forgotten. To make matters worse, in recent years, for reasons mentioned below, the Family Welfare Association has not been free to supplement the provision for this need to the same extent as it has in the past.¹ The number of cases itemized is small (7 per cent.) because so many schools, clubs, churches and other agencies have organized clothes-distributing services, but also because only severe cases of clothing need were recorded.

To give further point to these measurements, a special check was made, through the co-operation of the Family Welfare Association, of the incidence of all cases of illness, both major and minor, among unemployed families in a given month. All cases of children notably underweight were recorded at the same time as well as those exhibiting other symptoms of under-nutrition. As this month was August (1937), both rates would be somewhat lower than average, in the one case because illness is proportionately much heavier in the winter, and in the other because a considerable number of the children by this date had been to or were in summer camps. On this basis it was possible to supplement the data of Table 44 by estimates which enable a summary picture (Fig. 33) to be drawn. The complementary figures of housing conditions are derived from the records of 150 representative Family Welfare cases, drawn from various parts of the city, which were part of a detailed housing survey made by the Montreal Metropolitan Commission in the same year. Here it should be pointed out that, since the Family Welfare Association makes special efforts to move families from particularly bad accommodation, and also because its

¹The Association actually distributed 776 articles of clothing during the month, but none of them went to children on city relief for the reasons dealt with below (p. 134ff).

rental allowances are higher, the housing conditions of Association families are undoubtedly better than the average among persons on City relief.

MENTAL HEALTH

A number of other consequences of unemployment are listed by the social workers in their reports, the details of which are not strictly relevant to the present study. But a number of them which centre in the problem of mental strain and unemployability should be mentioned. The loss of

UNEMPLOYED FAMILIES ON RELIEF

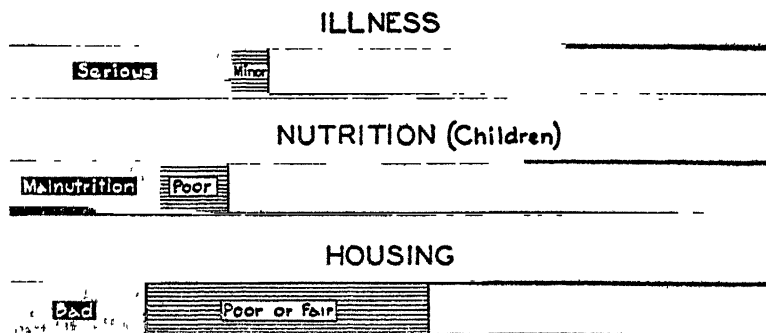


Fig. 33 Prevalence of illness, malnutrition, and bad housing among sample group of unemployed families in Montreal, 1937. (NB The figures show the proportion of cases *per family*)

previous social and economic standards, feelings of hopelessness and lowered morale, strains which bring about all kinds of family discord, are recorded for 139, or 23.5 per cent. of the families. "In some of our families", comments one of the workers, "the men have given up looking for work and their loss of skill and confidence is very evident. Unemployment accentuates weakness of character and irresponsible men become more irresponsible." Another worker listed as evidences of loss of morale: "laziness, loss of ambition and ability to plan ahead and save, constant aimless moving, drunkenness, begging, and forced marriages" among families who, before the years of heavy unemployment, cherished an admirable respectability. Some men "have ceased to struggle, and their behaviour is now definitely anti-social." A worker

in a white-collar district listed: "development of anxiety neuroses, conflict between branches of a family due to financial dependency of one branch upon another, and lack of effort to hold a steady job, especially apparent in the younger generation"

Directly and indirectly, there are repercussions for children and adolescents. In the month of the survey 66 cases were reported of threatened family break-up, which would leave children without care. In 51 other cases the head of the family actually had deserted, leaving wife and children ineligible for relief because of his defection and therefore a charge on private philanthropy¹. There were 80 cases (13.5 per cent., or one case to every seven families) of juvenile delinquency, children being either already involved with the Juvenile Court or suffering from deterioration of character and habits which presaged serious problems in the future. That many of these children have suffered from the example of the attitudes of idleness and hopelessness exhibited by the parents is certain. But it is also thought in some cases that "children are being forced out of the home owing to economic pressure, as they are expected to give their whole wages to their parents, and have no satisfaction in earning and buying their own necessities as their parents administer the money."

For both children and parents, there are abundant causes here from which psychoses may develop. Twenty-nine cases of actual mental disease had been diagnosed in the 591 families surveyed, a rate of about 5 per cent. While a few of these were organic, the psychological reactions of protracted worry were regarded as major contributing causes for the majority.

THE SAMPLE FROM THE POINT OF VIEW OF RELIEF ADMINISTRATION

Taken along with the results of the preceding studies, evidence such as this justifies the estimate that at least twenty to thirty per cent. of the unemployment problem is a health problem, so far as remedial treatment is concerned.² Certain

¹Not all of this is premeditated. "Fathers become discouraged in the city and leave to look for work in the lumber camps or the mining areas. They neglect to write their families and cause worry and inconvenience." Some of these drift away permanently.

²The relation is one of joint cause rather than direct cause and effect. Ill health may cause unemployment, and unemployment may lead to sickness, but more usually they are found together as the joint result of economic, social, and personal factors.

other implications are also strengthened by a study of social agency cases. Before these can be drawn, however, it is necessary to know something more of the character of the cases which are on Family Welfare rolls. There are three main groups. Firstly, families who are destitute but not eligible for municipal unemployment relief. In large part, this comprises the permanent dependence situations which occur in every community in good times and bad, many of which are only indirectly problems of unemployment. elderly persons who are too old to work and are not in receipt of pensions, or whose pensions are inadequate; widows and deserted wives, with children to support; men too ill to work and others with physical or mental handicaps. (The great majority of these were excluded from the foregoing survey.) In part also, however, this category includes the case which is a product of the network of residence qualifications for relief which has been built up by the municipalities of the country in the last six years. A man who moves from a locality in which he has an established residence (of one, two, three years as the case may be) even if it is to find work in some other city, cannot secure relief if he becomes destitute there. Many transient cases (of men with families) have thus come to private agencies from time to time,¹ who are not unemployables but able-bodied and fit for work.

Secondly, there are unemployed persons in receipt of city relief whose relief allowances are inadequate. This may be attested by various conditions,—lack of clothing, inadequate housing, malnutrition; inability to control children, estrangement between husband and wife, and other situations which demand case-work service as well as material relief. The (City) Unemployment Relief Commission supplies a minimum allowance for food, fuel, rent and clothing, and (since 1936) medical care of certain kinds. In the past, the Association has supplemented these minima in many cases. To-day an important question of principle has reversed this policy, and other serious consequences flow from it. Because of their own limited funds, their conviction that relief of unemployment should be a public responsibility, and their acceptance of the City Relief Commission as an efficient organization within

¹Because of budget limitations, private social agencies have been forced to curtail their assistance to such cases, and some have even adopted similar residence qualifications to those of municipalities

the scope of its means and statutory limitations, the Montreal Federated Charities decided they must refuse any supplementary cash assistance towards the items covered by the Relief Acts to persons already in receipt of city relief. This means that if food budgets are declared inadequate, the Family Welfare workers will try to teach the family better budgeting and buying, but cannot make an extra allowance for food (unless evident illness or malnutrition is present). The same applies to bad housing conditions. If children of relief families cannot attend school because of insufficient clothing, the Association as such has to refuse help. It is obliged to deal with the consequences of these conditions rather than to change them. Service work, of course, is increased, in helping families to untangle their personal problems, to make the most of meagre allowances, in advice on diets, the care of small children, education and preventive health work, assistance in problems of delinquency, in general, attempting to bolster morale. The anomaly of the situation, at present at least, is that for the family not on city relief, the Family Welfare Association provision is likely to be more ample, since its principle is to keep up the standards of the family, to provide the wherewithal for a self-respecting life and a home atmosphere from which children will not suffer. This means not merely adequate nourishment but clothing, essential household equipment, etc., where necessary.

The third group comprises workers whose earnings are inadequate for the subsistence needs of their families. Irregular work or underemployment of other kinds, low wages, dependence on the earnings of women or juveniles at unskilled jobs, large families, are the chief causes. Here again unemployment is not the sole cause but it runs like a thread through most of the situations. Supplementary income and constructive aid make many of these short-term cases, but their numbers have been increasing on a serious scale. Men find work and come off relief, to discover that their wages leave them in no better and often in worse condition, if the work is irregular. if there is a large family, or heavy debts.¹ The latter is important because wages are seizable by creditors whereas unemployment relief is not.

¹A man may be struck off the relief rolls for refusing a job, but the Relief Commission has had to rule that he is not so disqualified if the work carries less than a certain minimum rate

CONCLUSION

These conditions which have been described do not deal directly with health, but the question of health provision for the unemployed cannot be properly approached without an appreciation of them. In the first place, it is clear that sickness is linked with many other factors, among marginal and sub-marginal groups of the community. Further, mental as well as physical health is a matter of concern for unemployed and under-employed families. Thirdly, unemployment is linked with other problems, economic, administrative and personal, in the lower-income groups. Differences in health standards are marked off not so much by unemployment as by occupational and wage status. The unemployment of depression times, which renders many families dependent for the first time in their lives when their savings and resources are drained away, has the same ultimate effects on health conditions as the low wages and irregular employment of some groups which make these conditions for them almost continuous. Thus the case-loads of social agencies include both the "new poor", and the "chronic" or continuously marginal cases. They are difficult to sort out, not only because of the consequences of seven years of depression in the labour market, which have demoralized many from both strata, but also because of other complications which the development of relief administration has brought about. Categorical separation (into cases of temporary sickness, permanent incapacitation, old age, widowhood, etc.) will have to be undertaken if social provision is to be properly reorganized. But the distinction between permanent cases—the poor "who have always been with us"—and what were at first called "emergency" cases (workers laid off due to industrial depression) will have to be abandoned. As a matter of fact, prolonged unemployment has caused the categories to merge. And as a matter of principle, if unemployment, like sickness, *is* an emergency in one sense (i.e., from the point of view of the individual who has lost his job), it is, from the social point of view, a permanent liability. Public responsibility, therefore, is inevitably involved. This is the third implication of the data of this chapter. It shows that a fair and adequate standardization of medical provision for the unemployed cannot be organized without careful reconsideration of the whole network of relief regulations.

CHAPTER 17

SCHOOL-AGE CHILDREN

IT HAS already been suggested that general economic status rather than unemployment is a primary differentiator of health standards. The material examined in the present chapter is chosen in such a way as to throw further light on this vista of analysis. Body weight is the simplest, though not a complete index, of general physique, nutrition, etc., if it can be properly compared with height and age. Physical conditions among children of school age may also be taken as a simple index of health conditions and economic factors affecting them, in the home, if groups sufficiently large to be representative are averaged. On this basis the data of height and weight and certain other facts were compiled for three areas in Montreal, defined as closely as possible to represent three different grades of economic status. The source was the records of the medical examinations of children which have been periodically conducted in (Protestant) schools since 1930,¹ and which were made available for the present study through the courtesy of the medical officers and school officials concerned. The years covered (1931-1937) are thus all depression-years, but this condition holds true for all three groups. At school medical inspections, children of all ages are examined; by grouping ages together irrespective of the year of examination, therefore, a much larger range of ages than of individual boys could be measured². Seven to fifteen inclusive were chosen as the age-limits between which a sufficient number of recordings were available.

CHARACTER OF THE SAMPLES

Economic status was delimited by a combination of occupational and geographical information. For Westmount, a complete set of data was available from all schools, which included the occupations of the boys' fathers; about one-third of this was abstracted. To define the sample even more

¹In Westmount; 1931 in the case of the other schools

²Records for boys only were abstracted. Not counting discarded cases, 1,807 boys were covered by the total samples, but this comprised 6,413 "age-entries".

strictly as a high-income group than its geographical base alone would produce, the cards relating to boys whose parents were artisans or clerical workers were excluded. Since occupations were not generally available on other school-records, a regional criterion was employed. A second school was chosen from a district in Northern Montreal¹ in which the typical residents are skilled men and white-collar workers; the third, from a district "below the hill"² where a number of indications, referred to below, marked off a definitely low-income group. To improve the comparability of the samples, all boys with one or both parents deceased were excluded in each case.³ Record-cards on which ages were not fully entered (or in the case of Westmount, age or parent's occupation) were also omitted. The total data used were distributed as follows:

Class	Number of	
	Boys	Entries
I High Income	770	3,506
II White-collar and Skilled	460	1,353
III. Low Income	577	1,554
Total	1,807	6,413

In the Westmount schools about 89 per cent. of the children are of Anglo-Saxon racial origin (i.e., from British-born or English-Canadian families), nearly 11 per cent. Jewish, with a fractional percentage of other races and nationalities. The North End school has the largest Anglo-Saxon group, about 2 per cent. being Jewish and a fractional proportion of other races. The St. Henri school has the most mixed population of the three. A little under 70 per cent are Anglo-Saxon and 8 per cent Jewish; children of Finnish and Italian parents, with Central Europeans and a few French-Canadians make up about 5 per cent.; the second largest group, however, are Negroes who constitute about 17 per cent. of the total.

Besides occupations, certain other facts give direct evidence of economic status. Only one school in Westmount has had

¹"North End", near Outremont

²West of St. Henri near the Lachine Canal.

³This was especially important in the St. Henri school, where a number of the children who attended were from orphan homes and foster parents. A few of these who were not identifiable were retained, but the great majority were excluded.

any considerable number of children from families on relief, and as the records were available it was possible to exclude from the Westmount sample children whose families had been on relief the preceding five years for any period whatsoever. In the other two districts, while identification was not undertaken, the incidence of destitution was known for the school population as a whole. In the North End school only 25 out of 860 pupils, or less than 3 per cent, were from families on relief. in the St. Henri school the estimate of the principal was that 35 per cent. of the children had been on relief, while about 70 per cent. (including the latter) were at marginal or submarginal levels of income. The amount of free milk provided shows the same differences. Milk is served at recess in all schools: it is bought by those pupils who can afford it, but is available free for those who cannot and who are undernourished.¹ In the North End school, about 200 out of 860 pupils have availed themselves of the opportunity of buying milk but free milk has not been provided for more than twenty (2.3 per cent.). The St. Henri school, however, provides free milk for 200 to 250, about a quarter of its total enrolment.

In general this set of comparative groups is separated by wider margins than the three categories used in the individual examinations (Chapters 4 and 11). The North End sample represents the white-collar and higher-grade industrial classes (clerical and commercial occupations, foremen, skilled men, etc.). Examination of the Westmount data shows that this sample represents not a white-collar section in the usual sense of this word but professional, managerial and other higher-salaried occupations. The sample-units are best described as "high-income", "white-collar and skilled" (or better-off wage-earners) and "low-income" respectively, and these terms are used in the following text.

COMPARATIVE HEIGHTS

Heights are recorded under uniform conditions, in bare feet and to the nearest quarter of an inch. In averaging these the median, which is unaffected by extreme cases, is used in preference to the arithmetic mean. The differences shown in the results are very striking. At age 7 the average child from the high-income family is two inches taller than the

¹ More than 10 per cent. under normal weight is taken as the general criterion. Recommendation is made by the visiting doctor.

seven-year old from the low-income family, and at age 15, nearly five inches taller. Growth in the first group averages 17.5 inches in eight years as against 14.8 inches. The standards and growth shown by the children in Group II are intermediate between the other two but for the most part closer to those of the low-income children. The curves of

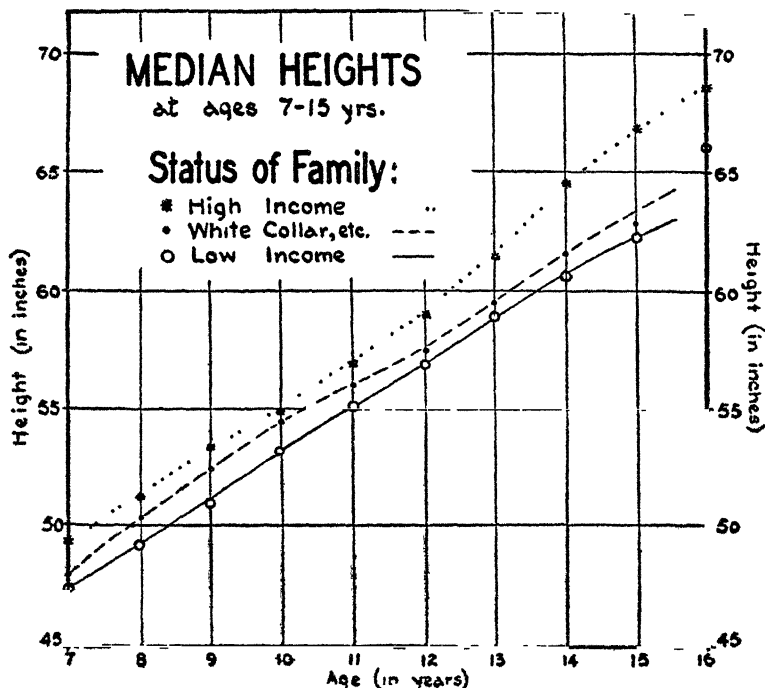


Fig. 34. The median heights of boys aged 7-15, from three groups of families classified by socio-economic status

growth are shown together in Fig. 34. Reference to the supplementary figures in the Appendix¹ shows that the range of heights within the most representative portions of each group are closely similar, with the possibility that the figures for the boys aged 15 in the low-income group may be somewhat less typical than the rest.²

¹ See p. 230.

² Figures for both heights and weights of boys aged 12 and 14 in the St. Henri school were interpolated as the results were so far inconsistent with the growth-trends as to suggest either that entries had been incorrectly made or a considerable number of ages understated. The medians for the entries at age 16 which were available for Groups I and III are shown in Figs. 34 and 35.

TABLE 45 HEIGHTS OF BOYS AGED 7-15, COMPARED ACCORDING
TO SOCIO-ECONOMIC STATUS OF FAMILY
(Median heights in inches)

Age	I. High Income	II White-collar and Skilled	III Low Income
	inches	inches	inches
7	49 5	48 0	47 5
8	51 5	50 5	49 4
9	53 5	52 5	51 0
10	55 0	54 5	53 3
11	57 0	56 0	55 1
12	59 0	57 5	57 0
13	61 5	59 5	59 0
14	64 5	61 5	60 6
15	67 0	62 8	62 3

With this amount of divergence in growth already existent it is to be expected that weights should show at least equal differentiation. As Table 46 shows, there are in fact well marked differences in the average weights of the three groups of boys at all ages. The boy of seven from the high-income family is typically 4 pounds heavier than the boy from the low-income family, and at fifteen 8 pounds heavier. The boys from Group II occupy a more or less intermediate position. This is not true at ages fourteen to fifteen, where the weights are very close to those for the low-income children; but these figures, based on relatively few entries, are appar-

TABLE 46 WEIGHTS OF BOYS AGED 7-15 COMPARED ACCORDING
TO SOCIO-ECONOMIC STATUS OF FAMILY

Age	I. High Income	II. White-collar and Skilled	III Low Income
	lbs	lbs.	lbs
7	55	53	51
8	60	59	55 5
9	66	64	60
10	71	70	67
11	78	75	73
12	85	80 5	80
13	95	91 5	87
14	110	97 5	96
15	114	107	106

Median weights to nearest half pound. Weights recorded at examination did not include any clothing except trousers.

ently less representative. The average trends of growth are shown comparatively in Fig. 35.

It is of interest to enquire whether the differences in weight are in direct proportion to the differences in height or not. If the ages of seven to thirteen are taken, as the number of

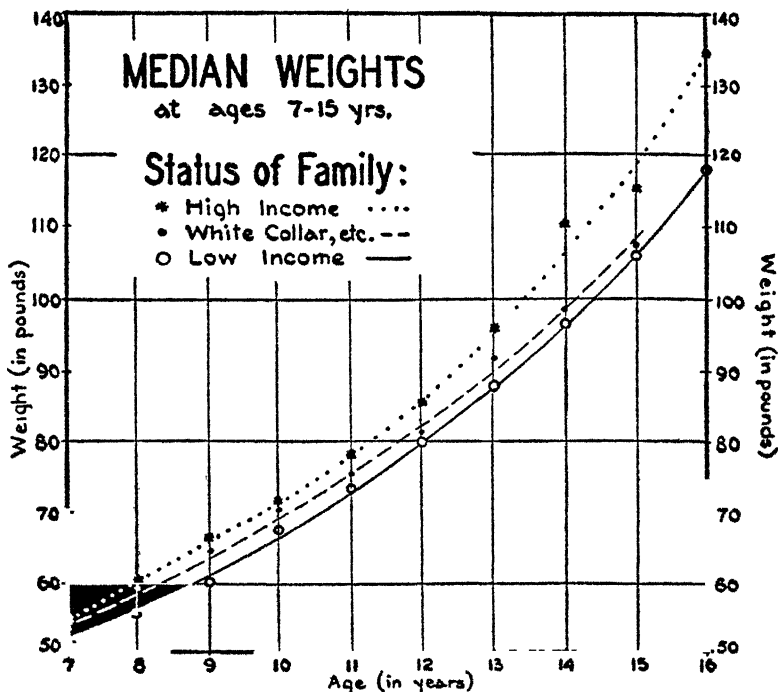


Fig. 35. The median weights of boys aged 7-15, from three groups of families classified by socio-economic status

entries is largest and most reliable between these limits, a simple measurement of this can be made. The extent to which the average boys from the low-income group are shorter than those from the high-income group is 4.4 per cent. and 4.1 per cent. respectively at these ages.¹ In weight the corresponding differences are 7.3 per cent. and 8.4 per cent.,² or approximately twice as great. While this in itself is not evidence of malnutrition, it suggests that differences in

¹Two inches shorter than 49.5, and 2.5 shorter than 61.5 (Table 45).

²Four pounds less than 55, and 8 less than 95 (Table 46).

nutrition affect the weights of growing children even more than the heights.

Undoubtedly, a number of other variables affect the relations between weight and height. Weight is itself a complex matter: a greater range of variation about the average for weights than for heights is to be expected, and this is true of the present data. (Cf. Table Vb in the Appendix.) But the significance of the study is that all the central measurements (within the quartile range) show a distinct difference in standards and growth between the three groups. To some extent differences in constitutional and inherited factors may have entered into this, but, on all the evidence these are overshadowed by socio-economic considerations.¹

The three samples herein measured if taken together give a good cross-section of all economic classes (though measurements from the highest income group are more numerous than they would be in a strictly representative combination). The median weights were therefore compiled for all heights between 45 and 70 inches, irrespective of age, for the combined total of over 6,400 entries. On this basis, a curve of normal growth, or expected median weights in relation to height, can be drawn which applies particularly to (English-speaking) Montreal children. For its comparative value, this is put on record together with a similar curve drawn from the standard chart of weights which is used in most Montreal schools.² It is interesting to note that the suggestion of this comparison, that the broad standard is somewhat high, accords with the results of a related study made in Toronto some years ago.³

SOME SUPPLEMENTARY MEASUREMENTS

As mentioned above it was possible to separate from the Westmount records all boys from white-collar and artisan

¹Measurements of this type have been available in Great Britain for a long period. For a concise evaluation of their significance, see Sir John Orr, *Food, Health and Income*, Chapter VIII. The following statement (from p. 41) is also of interest: "It appears that in the last fifty years, though the average height for all classes has risen, there has been no marked change in the order of differences between the classes."

²*Weight and Height of Children*, Circular No. 2, City of Montreal Department of Health, Division of Child Hygiene. The height-weight scale given here (prepared by Dr. T. H. Wood) is based on United States measurements.

³"Height and Weight Tables of Toronto School Children", *Public Health Journal*, September 1924, pp. 391-403. The standard scale of the American Child Health Association is also somewhat lower.

families, and to identify all relief cases. A few boys from unskilled workers' families were also separated by means of the occupational information. By placing these together with the relief cases, two economic-status groups corresponding to the major Groups II and III were available. While the totals in each case were only small (78 and 58 cards respec-

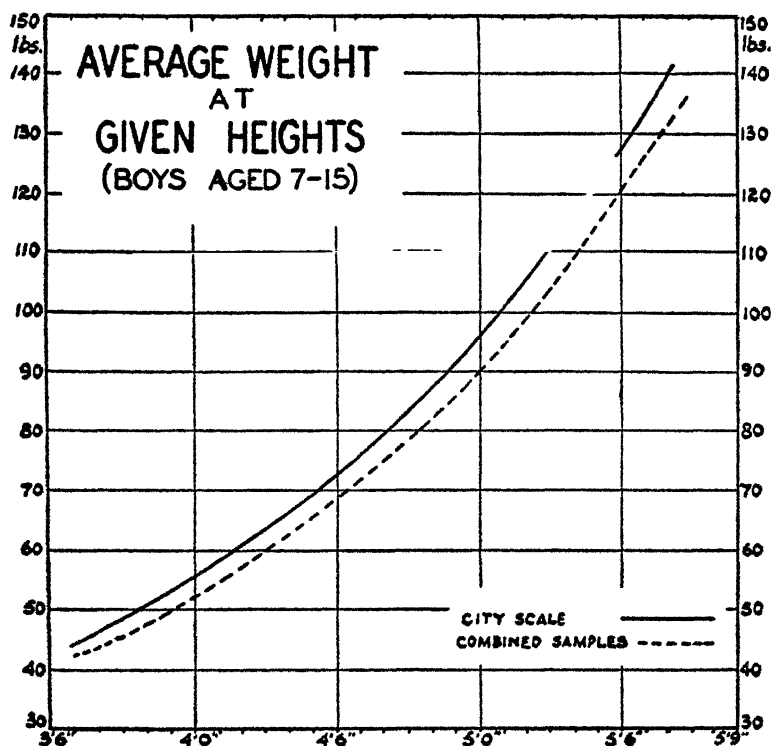


Fig. 36. Average (median) weight at given heights of boys of school age
Comparison of combined samples with standard city scale

tively), weights and heights were averaged in the same way as for the major samples, at three representative ages—8, 10, and 12. The degree of coincidence with the results for the main groups turned out to be remarkably close, as Table 47 shows. Only one figure (the median weight of the low-skilled and relief group children at age 10) diverges considerably,

TABLE 47 COMPARATIVE HEIGHTS AND WEIGHTS OF TWO WESTMOUNT SUB-GROUPS

Age	Westmount Groups		Group II*	Group III*
	White-collar, Artisan	Low-skilled, Relief		
<i>Heights</i>				
8	50 5	49 0	50 5	49 4
10	54 0	52 0	54 5	53 3
12	57 5	56 8	57 5	57 0
<i>Weights</i>				
8	60 0	54 0	59 0	55 5
10	69 0	61 0	70 0	67 0
12	78 0	79 5	80 5	80 0

*From Tables 45 and 46

and here the difference is so great as to be fairly certainly the result of some exceptionally underweight cases.

TEETH CONDITIONS AND DENTAL CARE

It was originally intended to compare the condition of teeth and of tonsils for the three main groups of children, as these are usually given special attention in school medical examinations. Unfortunately, it was found that the records for the "intermediate" and "low-income" schools were either not sufficiently complete or else not in comparable form for this purpose. In view of the close matching already shown by the Westmount supplementary groups, however, recourse may be had to these, for all of which a complete recording of teeth and tonsil findings was available.

The tables below show the results of yearly examinations of teeth and throat for boys between the ages of 7 and 15. A threefold rating is adopted (designated by the letters in the table). A denotes a slight departure from normal; B means that more pronounced defects are evident, and notice is sent to the parents recommending attention; C indicates unhealthy conditions which are in need of immediate attention. One, two, or all three of these notations may appear on a boy's card in the course of a few years, especially if warnings A or B are neglected. It is properly indicative of conditions among the three groups, however, to summarize the records irrespective of the number of boys as in Table 48, since the totals thus made reflect both health (so far as it is measured by teeth

and tonsillar conditions) and the amount of attention given to it

While the data for the three Westmount groups are based on examinations all made by the same doctor, so that the ratings are comparable in this respect, the smaller totals of Groups II and III¹ mean that less precision should be accorded to their percentages. None the less some significant differences are revealed between these groups and the main high-income sample.

The divergence is most striking and consistent in the condition of children's teeth. Over the age period of seven to fifteen broadly one-eighth of the boys from well-to-do families show defects ranging from slight to serious: the

TABLE 48 DEFECTIVE TEETH AMONG CHILDREN AGED 7-15, COMPARED BY SOCIO-ECONOMIC STATUS (WESTMOUNT)*

Conditions	I High Income	II Skilled, White-collar	III. Low-skilled, Relief
	%	%	%
<i>Incidence</i>			
A. Slight defects	3.9	4.6	5.4
B. More pronounced	8.4	22.7	23.5
C. Immediate attention	0.6	3.4	4.5
Total	12.9	30.8	33.5
<i>Relative weight of diagnoses recorded</i>			
A. Slight defects	30.4	15.1	16.2
B. More pronounced	65.2	73.8	70.3
C. Immediate attention	4.4	11.1	13.5
Total	100	100	100

*Cases recorded, as percentage of all children between the ages of 7 and 15 examined.

corresponding proportions for the other children are about one-third. The figures may be followed up further, for while the percentages of Groups II and III children needing minor dental attention are only slightly higher, the proportion of more pronounced cases, which are notified to the parents, is nearly three times as high. The immediate-attention cases show a further accentuation of this. The percentage is fractional in Group I, as compared with 3 to 5 per cent. of serious cases among children of the lower-income families.

¹409 and 221 entries as compared with 3,306.

The decline in standards shown by the A percentages as one passes down the economic-status scale may in part represent basic differences in constitution and physique, but it is presumably a reflection also of different degrees of dental care in the earliest years of life. The possession of strong teeth at the age of, say, eight may be the good fortune of a healthy inheritance in some cases, but of good diet and dental treatment in others.¹ A specific study, along the present lines, of dental conditions and treatment-history up to the age of seven, would be necessary to establish this more fully. But the differences in the B and C rates are so great as to indicate clearly a greater number of neglected cases in the lower-income groups. Put in another way, the greater the extent to which early defects (A) are remedied, the smaller the incidence of conditions B and C are likely to be.

The second part of the table, showing in each case the relative "weight" of all the diagnoses (A, B, and C) totalled as a whole, reflect this aspect of the examination records. A high percentage of A's (indicating that a greater proportion of the total defects among the children are slight) denotes a higher general standard, while a large proportion of C's implies that dental services were not secured in spite of the fact that the need for them was known or had been pointed out.

A closer view, showing dental conditions at successive ages, focuses this picture most clearly. Figures for other than condition B and beyond the age of 13 are too few to justify a table, but the trends are sufficiently well shown by this limited measurement (Table 48a). If children are re-examined periodically and receive treatment, an improvement should be registered in course of time. In the major group (I) this is what appears. The quota with dental caries and other defects requiring attention falls continuously after the age of nine, from 10-12 per cent. to 6 per cent.² Among the other children the rates are much higher throughout. Allowing for the wider fluctuations to be expected in the other rates,³ some but less well-marked improvement is

¹"Though there is still some difference of opinion as to the relative importance of the dietary factors involved, there is no longer any doubt that the diets of the lower-income groups, which are markedly deficient in minerals and vitamins, are not such as to promote the growth of sound healthy teeth" Sir John Orr, *op cit*, p. 42

²The rates at ages 14 and 15 for Group I are 4.8 and 4.5 per cent

³Because of the smaller figures on which they are based

TABLE 48a. CHILDREN NOTIFIED AS REQUIRING DENTAL TREATMENT, (CONDITION B) AT AGES 7-14 (WESTMOUNT)

Age	I. High Income	II Skilled, White-collar	III. Low-skilled and Relief
	%	%	%
7	10.1	25.0	48.1
8	10.7	35.1	22.6
9	12.4	27.5	22.2
10	9.1	19.6	13.8
11	7.3	19.2	27.6
12	7.4	20.8	23.1
13	6.1	28.0	25.0

shown for the boys from skilled and white-collar families, and none if not a definite worsening among the lowest-income group.

TONSIL CONDITIONS

Tonsil conditions are not an index of parallel significance to the condition of teeth. Unlike the latter, as an element affecting general health and requiring care they are not of the same continuous importance. Teeth may vary from the normal or maximum of health in much wider degree, and are apparently more influenced by factors related to socio-economic status. The high percentage of tonsillectomies which is common, at least among juveniles, has already been remarked. It might even be suggested that treatment of tonsillar defects is more readily sought than dental services, though whether because they are easier or cheaper to obtain or because they are enforced by the "emergency" nature of the operation is hard to say.

Some of these factors are reflected in the present statistics. It is interesting to find that the incidence of defects of one grade or another is practically the same for all the children. The percentage also is high—about two-thirds of all boys examined. By far the greater number of cases which make up this total, however, are slight enlargements and infections. The more significant conditions, B and C, are twice as common among the two lower-income groups. Urgent cases (C) are very few; but relatively speaking, they are considerably more frequent in Groups II and III.

Although the children from the high-income families show a higher rate of minor cases (59 per cent. as compared with 53 and 48 per cent.) the rates for B and C are by contrast

TABLE 49. DEFECTIVE TONSILS AMONG CHILDREN AGED 7-15, COMPARED BY SOCIO-ECONOMIC STATUS (WESTMOUNT)

Conditions	I. High Income	II Skilled, White-collar	III. Low-skilled, Relief
	%	%	%
<i>Incidence</i>			
A Slight defects	59.0	52.6	48.4
B More pronounced	7.5	13.0	14.9
C. Immediate attention	0.5	2.0	1.8
Total	67.0	67.5	65.2
<i>Relative weight of diagnoses recorded</i>			
A. Slight defects	87.7	77.9	74.3
B More pronounced	11.6	19.2	22.9
C. Immediate attention	0.7	2.9	2.8
Total	100	100	100

very low. The inference is that more children received surgical treatment at the first signs of abnormality and prior to the next medical examination, than in Groups II and III. The relative proportions of all diagnoses recorded show these differences on a comparable basis.

Since so large a proportion of tonsil cases are noted early (Condition A) the statistical basis of the table showing the figures for notified children at specific ages is slighter than that of Table 49a. But it is worth reproducing if only to show the well-marked decline in cases requiring operation which appears among Group I. In the lower-income groups the percentages are higher, and show a much less definite decline.

TABLE 49a. CHILDREN NOTIFIED FOR TONSIL TREATMENT (CONDITION B) AT AGES 7-14 (WESTMOUNT)

Age	I High Income	II Skilled, White-collar	III Low-skilled, Relief
	%	%	%
7	12.3	19	22
8	9.7	24	13
9	9.3	15	15
10	9.8	9	10
11	8.0	15	17
12	4.6	8	27
13	5.0	8	15

The absolute figures are given in detail in Table VI, Appendix

CHAPTER 18

INFANTS

It is now an accepted practice in good infant care to record and follow up closely the evidence of weight during the first year of life and growth. If a collection and comparison of such data, from many quarters, were made on a large scale, it is likely that some important trends and principles could be established. These measurements would need of course to be related to socio-economic criteria and to race, constitutional standards of parents, the extent of medical care, and so forth. Nothing approaching so comprehensive a study could be attempted in the present case. Certain specially defined material was available, and the objective was to illuminate one or two specific points.

The Child Welfare Association of Montreal, among its other activities, has conducted for several years a number of "Well-Baby Clinics", which serve a large clientèle of working class families throughout the city. Weights at birth and at later periods are recorded for the children of all these families who have received advice or care. Since information as to income, etc., is known for the families a classification of this data by reference to economic status was possible. The fact that records existed for the year 1928 was also valuable, as a comparison of depression and pre-depression periods was sought: 1932-3 was chosen as a typical year of heavy unemployment and relief.

Weights at one month after birth and at one year were selected as the index figures. While influences on nutrition other than adequacy of food become increasingly important for growing children and in later life, they are least likely to be operative on the weights of new-born infants. Some reflection of the adequacy of food in the home, as between different income groups, should therefore be expected in the figures. A year's growth offers supplementary indications. Both this and the comparison between the two years are important because of the change in status of the marginal families.

Over 400 families were covered by the records for each of the two years. Four divisions of economic status were used,

as shown in Table 50. "Sufficient" here means that the income was enough to meet the minimum needs of the family, the actual figure varying to some extent with the number of children, etc. The marginal group includes the cases of

TABLE 50 DISTRIBUTION OF FAMILIES IN THE SAMPLES,
1928 AND 1932-3

Income-Group	1928		1932-3	
	No.	%	No.	%
A Sufficient	94	22.4	99	24.3
B Marginal	201	47.8	91	22.3
C. Inadequate	125	29.8	86	21.1
D Relief			132	32.3
Total	420	100.0	408	100.0

uncertain employment the income is adequate (in the above sense) when work is steady, but a lost day causes it to become inadequate. In the third class income is definitely and continuously too low to meet family needs. In the depression year those on relief are separately specified and make a fourth category.

The first significant indication to be noted is the number of families in the sample who were on relief in 1932-33. The general clientèle of the Child Welfare Association has not altered radically, and it is clear that a large proportion of the families with "marginal" and "inadequate" incomes have fallen on relief. The two groups of families are much the same with the important difference that those with the least resources are completely dependent in 1932-3. Throughout, it is important to remember that the sub-groups are separated by relatively small differences. As a whole, the group is drawn from the rank and file wage-earner classes, and few if any of the incomes would be above \$100 a month.

COMPARISON OF WEIGHTS

The indices which are most suitable for the data here concerned are the weights of the median member of each group and a measure of the range of variation found within the most representative half of each group. The quartile deviation is employed for the latter purpose.¹

¹ Cf. Table Vb in the Appendix. As in the previous chapter, the median is employed as it is unaffected by extremes at either end of the scale.

On this basis, two tendencies appear. First, there is revealed a measurable superiority in weight at first month of babies born in 1932-33, except to the lowest-income families. At one year, there is again to be found an improved position in all groups in 1932-3 including, this time, "inadequate-income" and "relief" groups, which show much the same figure. Secondly there are sufficiently well-marked differences between the best and worst-off families in each sample, to be regarded as of some factual significance (i.e., suggesting opportunities for better diet, etc.). In the figures for 1932-3, there is a steady decline in weight as one goes down the scale from "sufficient-income" to "relief" families (9.0, 8.9, 8.6, 8.4). The range of variation also is smaller in the two upper groups. The 1928 data show some deviation from this in the case of the marginal and inadequate families, the explanation of which probably rests in the fact mentioned previously, that the differences in income between the groups are not great. It is likely that both had potential relief families included in their ranks at that date. There is also some ground for the belief that the classification of 1932-33 is somewhat more precise.

TABLE 51. WEIGHTS OF BABIES BORN IN FAMILIES OF DIFFERENT ECONOMIC STATUS, 1928 AND 1932-3
(Weights in pounds and tenths of pounds)

Income Group	1928		1932-3	
	Median	Q D *	Median	Q D. *
(a) <i>At one month</i>				
Sufficient	8 8	±0 9	9 0	±0 9
Marginal	8 4	±1 1	8 9	±0 8
Inadequate	8 6	±1 2	8 6	±1.1
Relief			8 4	±1 1
(b) <i>At one year</i>				
Sufficient	21 7	±1.5	22 3	±1 5
Marginal	21 3	±1.7	22.5	±1 7
Inadequate	20.9	±1 7	21 3	±1 7
Relief			21 3	±1.3

*See footnote, Table Vb, Appendix.

In sum, it would seem that two sets of influences may be discerned. If health is correlated with weight in the first year of life, less satisfactory health conditions are enjoyed on the average by infants born in the marginal and sub-marginal families. On the other hand, while differences of income still played their part, general standards had not fallen (at least

as measured in 1933): if anything they were improved. Whether the families are treated as one group or as sub-groups, slight increases in infant weights and/or reduction in central range are revealed throughout. The total increases are, at one month, from 8.6 ± 1.0 to 8.8 ± 0.9 pounds; and, at one year, from 21.5 ± 1.7 to 21.8 ± 1.4 pounds. While in absolute terms the changes are small, for a period when a regression might have been expected they are significant. Better medical care, possibly more continuous if not necessarily more ample food supplies, are presumably the reason.

In all the figures above, it is to be noted that in no case is the range found within the most important portions of the samples unduly large, i.e., the summary indices used would appear to be well representative of all the members of the group studied. The figures of the highest and lowest weights found in the sample are naturally more arbitrary and show the exceptions rather than the central tendency. Nevertheless they are of interest in showing how far these extremes may go.

TABLE 52. ABSOLUTE VARIATION IN THE WEIGHTS OF BABIES FROM FOUR CLASSES OF WAGE-EARNING FAMILIES, 1928 AND 1932-3

Income Group	1928		1932-3	
	Min	Max	Min	Max
(a) <i>At one month</i>	lbs		lbs	
Sufficient	5 6	12 8	6 2	14 1
Marginal	5 3	12 5	6 1	11 4
Inadequate	5 6	12 0	5 9	12 1
Relief			4 6	15 5
(b) <i>At one year</i>				
Sufficient	16 3	27 1	16 5	30 0
Marginal	16 1	27 8	17 9	26 9
Inadequate	14 8	25 4	17 0	29 8
Relief			16 9	33 1

A few points seem worthy of some comment. At age one month, a close similarity in the limits is shown by the figures for all the income groups in 1928, whereas there are much greater extremes in 1932-3, particularly among the relief families. At the end of one year of growth, the most noticeable figures are the evidence of some cases of very low weight in the "inadequate-income" families (presumably nearest to relief) in 1928, as contrasted with much higher figures for the relief group in 1933. In the light of medical and social welfare experience these special cases could no doubt be further explained, but it is sufficient to note that they are not inconsistent with the general tendencies suggested above.

CHAPTER 19

THE INCIDENCE OF MALNUTRITION

AT THE ROOT of poor health standards which themselves trace back to the status of the family lie the factors of nutrition. Inherited organic strength, housing and clothing, the types of work which individuals do and their related strains, all play their part, but sufficiency of food and balance of diet are fundamentals. One study after another has pointed in this direction, and it is evident that a great deal more research needs to be done in Canada, both on the actual levels of living of sub-marginal groups and on the standards by which they should be tested, to enable a clear-sighted programme of remedies and adjustments to be evolved. This chapter gives the results of a small but intensive enquiry into the extreme case

Nutrition and related factors were studied in a group of families who have lived at the relief level of income for a period of five years. Contact with twenty-five such families in Montreal was arranged through the Child Welfare Association (health service), and a detailed examination of all the individuals in these families, 122 in all, was conducted. The first step in the survey was a visit to the home by a public health nurse or social worker. Both the family history and its budgetary and dietary practices were ascertained prior to the medical survey. The physical examinations were conducted by a group of eight physicians, of whom two were pediatricians, two neurologists, and four internes. Many of the examinations were checked by a second examiner, and, in most cases, the records were scrutinized by a group at the time of summarizing findings. A clinical estimation of nutrition was attempted in each case and the examiner summarized his general impression of the nutritional state of the individual as Good, Fair, or Poor. The criteria included such things as skin colour and texture, muscle tonus, quality of hair, the general bearing of the patient, his susceptibility to infection, etc. Such diagnoses can never be completely accurate but, supplemented as they are by the composite impression of a person's state of general health which the examiner receives, they are reasonably valid for comparison.

Weights conformed fairly closely to the general clinical ratings, although an incidental result was to bring to light some notable examples of the error which is likely in the individual case, if nutritional state is estimated only by the relation of actual to "normal" weight on a height-weight scale. One person five pounds "over weight" exhibited definite symptoms of malnutrition, while another, ten pounds "under weight" was as far as could be ascertained in an excellent state of nutrition. Haemoglobin estimations were all made by one physician, using the Palmer method. No indications were obvious other than a marked tendency to normality. Dental examinations were carried out by three different dentists. Their results may be summarized without the necessity of a statistical table in the statement that the condition of teeth in this group was better than that of the average relief population as examined in most hospital clinics, but decidedly inferior to that seen in office practice. So far as physical factors of this type were concerned, the sample was not an abnormal relief group.

The net finding for the sample as a whole was that the nutritional state of 45 out of the 122 persons was only fair, and definitely poor in 15 cases; 62 were adjudged reasonably good. This is equivalent to saying that just under one-half were poorly or insufficiently nourished, while one in eight was showing marked evidence of defective nutrition.

TABLE 53 NUTRITIONAL RATINGS OF THE MEMBERS OF SELECTED RELIEF FAMILIES

Members of Families	Nutritional State			Total
	Good	Fair	Poor	
Adults	23	5	5	33
Children (0-5)	1	10	2	13
Juveniles (6-15)	27	27	7	61
Adolescents (16 and over)	11	3	1	15
Total	62	45	15	122

The incidence of malnutrition shows more clearly when the members of the family are considered in groups. Only about one-third of the adults and a quarter of the adolescents (aged 16 and over) showed poor or fair nutrition. More than half of the juveniles, however, and no less than 12 out of 13 of the children up to five years were poorly or only fairly nourished.

Taking all the children up to fifteen together, only 40 per cent. were in satisfactory physical health as judged by nutritional criteria. Evidently accommodation to food supplies and other factors is easier for the adult, while the incidence of malnutrition is heavy during the age periods of rapid growth.¹

DIETARIES AND BUDGETING

As the examinations proceeded, it was increasingly evident that two broad groups of housewives were being encountered—those who had a good knowledge of the principles of nutrition and were competent in marketing and budgeting, and those who knew little or nothing of balancing food values and were poor cooks and shoppers. Analysis of food budgets revealed a corresponding difference in dietaries. Of the 25 families examined, 13 were considered to be living on adequate dietaries. In making judgments in this enquiry, quantitative deficiency was rated as less important than lack of adequate variety. In the main, the children of these families claimed they had enough to eat. Some complained that they were frequently hungry at the end of meals; however, their diets were considered to be well balanced from the standpoint of vitamins and protein requirements alone. In the remaining 12 families, six were living on dietaries which were definitely unsatisfactory and the other six on dietaries which were only fairly satisfactory or on which the data were incomplete. Thus the total sample can be resolved into groups, one in which food standards were reasonably adequate, the other in which they were poor or doubtful. It is known that several of the families had supplementary incomes, though it was not possible to determine whether the better nutritional state in these families was due to there being extra money available for food, or to other factors. None the less, a re-examination of the results as between the two halves of the sample is therefore of much interest. In Table 54, Group A and Group B comprise the “adequate-budget” and “inadequate-budget” families respectively.

The totals show a marked difference. In round numbers, 60 per cent. of the members of the Group B families have inferior nutrition as compared with 30 per cent. of those in

¹Too much assurance should not be placed on the small sample of adults. It is a frequent experience, to those who know the economics of poor families, to find that the mother's nutrition may be the lowest because she stints herself not only for the children but for the father, who is the working breadwinner on whom the whole family depends.

Group A. About one-third of the parents are below normal in each group but more are rated poor in Group B. Among the children (of all ages) the difference in showing is the most significant. Sixty-two per cent. of those in families where the food budgeting was adequate showed reasonably good

TABLE 54. NUTRITIONAL STATE IN RELATION TO ADEQUACY OF DIETS AND BUDGETING

Group	Good	Fair	Poor	Total
<i>Adults</i>				
Group A	13	4	1	18
Group B	10	1	4	15
<i>Children</i>				
Group A	21	13	0	34
Group B	18	27	10	55
<i>Total</i>				
Group A	34	17	1	52
Group B	28	28	14	70

nutrition; in the inadequately-budgeted families, only 33 per cent. Moreover, while none from Group A showed definite deficiency symptoms, there were ten (about 18 per cent. of the total children in the group) in Group B.

IMPLICATIONS

While the material here presented relates to a small group, it was carefully and expertly examined. When proper assessment of its representativeness is made, the indications are significant.

It should be remembered firstly that Family Welfare relief allowances (which some of the families had received at some periods) are somewhat higher than the standard scales of city relief,¹ and also that personal service and encouragement is extended to families by the private agency. In many cases this includes some training in food values and buying. However, most of the families had been on city relief for long periods, so that any superiority of care which had been their lot was not continuously experienced. What is even more important is that all the examiners, who were carefully questioned on this point, agreed that the families in this sample exhibited higher socio-economic standards than those of most relief patients seen in (Montreal) hospital clinics, and also a

¹Cf. next chapter.

better nutritional state. The good showing of some of the children in the group was particularly an occasion for remark. In part, no doubt, this may have been the result of inherited physique; but in part also a carefully managed (and possibly a supplemented) relief allowance was certainly indicated.

Even though these are families who have been dependent for five years, therefore, it is not at all certain that they represent the lowest level of nutritional conditions among the unemployed. In other groups, constitutional weakness, large numbers of children in the family, lack of budgeting skill, and similar factors may be producing nutritional inadequacies on a larger scale.

How the figures in this chapter compare with the results of other findings in the present series of studies can be shown in a broad way, although considerable allowance for differences in examiners and in time of examination must be made. They agree most in showing a large sub-normal proportion and a higher incidence of malnutrition among children and juveniles than among adults.

INFERIOR NUTRITION* COMPARISON OF SAMPLES

	Fair %	Poor %	Total %
1. Unemployed adults	30	15	45
2. Unemployed boys (14-18)	22	31	53
3. Unemployment case-load of social agency children (mostly school age)		22	(50)
4. 5-yr relief group (children, all ages) ¹	45	12	57

It is more than incidental to point out that malnutrition need not be extreme to be a drawback from the point of view of general vitality, receptiveness of children in school, ability to get a job, and similar factors. No cases of rickets, scurvy, or other specific vitamin-deficiency disease were found in the present study; but the twelve per cent. of malnutrition cases diagnosed on general grounds were definitely handicapped in the ways here suggested.

Finally, and as a special inference of this chapter, careful budgeting and a knowledge of dietary make a vital difference at the marginal levels of income. In those families in which there is an appreciation of food values, with close attention to economical marketing, the nutritional state of growing

¹ Figures for the adults based on too small a total to be comparable.

children in particular can be much more satisfactory. But there are two ways of interpreting this fact. For low-income families, whether they are on relief or still self-supporting, it is obviously desirable to provide systematic practical instruction in budgeting, marketing, meal planning and cooking, in order to avoid serious malnutrition. None the less, poverty and unemployment, rather than ignorance of the principles of nutrition or poor household economy, are the primary sources of malnutrition. Unsystematic buying and improper preparation of food is not confined to any one socio-economic group. Higher incomes and more adequate relief allowances which allow a reasonable "margin of error" are a direct part of the remedy.

On the subject of food choice and preparation, as on that of medical care generally, there is undoubtedly ample room for educational activity. Depression experience has stimulated interest in this work, though it is very far yet from being a standard service to relief and low-income families.¹ Much of the present effort of both public and private agencies is unco-ordinated. But none of this should be allowed to obscure the other point. To ensure adequacy of food, in quantity and nutritive components, the monetary relief allowance needs in the majority of cases to be greater than the calculated cost of a minimum diet. At least 15 or 20 per cent. seems a reasonable addition to provide this margin, though some investigators have placed the figure considerably higher.² The evidence which is adduced in the following chapter supports such an adjustment from several points of view.

¹For a review of various examples of this type of work in the United States see *Food and Nutrition Work of the F E R A* (Release No 1226, July 1935, Works Progress Administration, Washington, D C). In Canada, the Canadian Welfare Council in particular has promoted this work through the formulation of minimum budget menus and the encouragement of home instruction through various agencies.

²Cf Sorenson and Gilboy, "The Economics of Low Income Diets", *Quarterly Journal of Economics*, Aug 1937, p. 677 and references.

CHAPTER 20

MINIMUM STANDARD BUDGETS AND RELIEF

TO JUDGE in its proper perspective the evidence of nutritional standards which has been presented in preceding pages, it is necessary to know something of the budgets on which the families in the samples described live. Strictly, these should be examined with reference to their nutritive content in terms of calories, vitamins, etc.;¹ also in comparison with relief scales throughout the country, and even with the income levels of unskilled workers and irregular wage earners. This is a large and important task which needs to be undertaken as a separate study in itself. Some of the implications of this kind of study will be apparent from the material in this chapter, but its immediate purpose is to throw further light on the medical findings presented in this volume.

Several scientifically evaluated food scales have been drawn up in recent years, of which two of the most authoritative are a set of budgets approved by the United States Department of Agriculture (Bureau of Home Economics) in association with the Children's Bureau, and a standard recently set by a special committee of the League of Nations.² Much less work has been done on the complete family budget needed to cover all requirements (housing, fuel, clothing, education and development) at minimum levels. This is far from irrelevant in considering the possibilities of under-nutrition, because the desire or need to meet other items of family living from an inadequate income is often met by cutting into the food budget. To focus the matter properly, it is necessary to begin with the problem of total needs in mind.

A detailed examination of minimum subsistence requirements for all items of living has only recently been made by

¹ Cf. *The Criticism and Improvement of Diets*; Memorandum to (British) Minister of Health, 1932. (H. M. Stationery Office, London.)

² (a) H. K. Stebeling and M. Ward *Diets at Four Levels of Nutritive Content and Costs* (U.S. Department of Agriculture Circular 296) (b) *The Physiological Bases of Nutrition* (League of Nations Publication, Health 1935, III, 6). The most convenient and authoritative sources summarizing some English standards are (c) B. Seebohm Rowntree: *The Human Needs of Labour* (Longmans; revised edition, 1936), and (d) Eleanor Rathbone (Children's Minimum Campaign Committee, London): *Memorandum on the Scale of Needs Suitable for Adoption by the Unemployment Assistance Board*, 1934.

the central relief authorities in the United States.¹ There is no equivalent official compilation in Canada. But one of the best known and most used total budgets of this kind is that approved by a special committee of the Montreal Council of Social Agencies in 1926, which has been repriced from time to time since that date.² All these standards, as is usual, comprise actually a series of budgets, i.e., for families of different sizes, and much more attention is now being paid to the details of this variation than formerly. But for summary purposes, a family of five (with three children at more or less typical ages) is the most convenient to select for comparison. This is in fact very near the all-Canadian average, though because of regional differences and, even more, the wide range of ages which may actually be represented in a family of three children it is easy to attach too much importance to this fact.

To conform with the standards which were carefully examined by the Montreal committee above-mentioned, a budget necessary to maintain health at a minimum cost for such a family would call on the average for the following expenditure:

TABLE 55 STANDARD MINIMUM BUDGET FOR FAMILY OF FIVE (ONE MONTH)

Item	1926	1936
Food	\$44 00	\$40 35
Housing	18.00	17 14
Fuel, light and gas	7 55	6 13
Clothing	15 20	13.04
Sundries*	7 06	6 67
Total	\$91 81	\$83 33

*Water tax, soap, carfares, school books, newspaper

Revalued from the original compilation to 1936 prices, this is almost exactly \$1,000 a year. In practice a series of important limitations apply to this budget, which are referred to later. But even as it stands, it is much higher than relief

¹Margaret Loomis Stecker: *Quantity Budgets for Basic Maintenance and Emergency Standards of Living*. Works Progress Administration, Division of Social Research, Bulletin 21. This valuable compendium should be much better known. A considerable amount of further research into costs and standards of living is currently being conducted in this division of W.P.A.

²*Relief and the Standard Budget*: Canadian Welfare Council, Ottawa (mimeographed).

allowances Since a considerable proportion of wage earners, because of low wages or irregular employment, or both, do not secure an income regularly attaining this size, it is obvious that social agencies could not maintain families at this level without serious repercussions in the labour market, apart altogether from the limits imposed by their own financial resources. Actually, although the inadequacy of this course is freely admitted, the allowances made by even the best organized agencies are considerably lower. During the period of time which covers most of the studies in this book, the Family Welfare Association, one of the chief private relief organizations in Montreal, has centred its operative scales around a minimum (for the family of five) of about \$56 50, or approximately seventy per cent. of the approved necessary standard.

More details of this operative scale are given below ¹ It should be mentioned that this budget is not applied with absolute rigidity. The needs of each family are considered on their merits, and extra allowances may be made or expenditures incurred at the discretion of the social service worker. Special foods in cases of sickness or poor nutrition, extra clothing, the replacement of essential household equipment, car fares, are examples. In point of fact, few of these deviations are large or continuous. But they mark an important difference between public and private unemployment aid, because municipal allowances subsidized under the Relief Acts are usually made on a fixed and strictly uniform scale.²

An estimate of how these scales rate as living and health standards can be formed from examining the following table. This shows the City unemployment relief allowance and the Family Welfare minimum, compared with the Montreal Social Agencies standard and with a similar one approved by the Council of Social Agencies of Washington, D.C., in 1934. The latter, while probably less well known, is worth citing because it is a particularly well documented budget based on the Stiebeling-Ward and other related U.S. Government

¹The food allowance is related not to the general budget referred to above but to the standards laid down by a special Nutrition Committee of the Health Service of the Federated Agencies of Montreal (*Minimum Food Budgets to Maintain Health*, Metropolitan Life Insurance Co., Head Office, Ottawa: various editions).

²These scales of course vary very considerable from place to place. (Cf. p. 169)

enquiries.¹ In each case the scale for a family of five only is shown, and the two standard budgets are valued for the year 1936 by the use of cost of living index-numbers.

TABLE 56 A COMPARISON OF STANDARD AND RELIEF BUDGETS (AS FOR FAMILY OF FIVE, IN 1936)
(Monthly average, winter and summer scales)

Item	Montreal Social Agencies	Washington Social Agencies	Family Welfare Association	Unemploy- ment Relief Commission
	(1)	(2)	(3)	(4)
Food	\$40 35	\$31 50	\$21 36	\$21 88
Housing	17 14	26 85	18 00	10 50(c)
Fuel, light	6 13	7 00	6 20	5 35(d)
Clothing	13 04	21 66	10 90(b)	3 25
Other items	6 67	28 05		1 25(e)
<i>Total</i>				
(a) Necessities	\$76 66	\$87 01	(\$51 00)	\$40 98
(b) All items	83 33	115 06(a)	56 46	42 23

(a) The monthly budget at the time of the compilation (1934) was \$107 62 or \$1,291 per year, since when cost of living (U S) has risen over 7 per cent (b) Joint allowance for clothing, replacements and sundries Medical care not included but could be secured in majority of cases Figure in brackets in the total is an estimate only, excluding medical costs (c) Includes municipal addition (\$2) to federal allowance. (d) Does not include gas (e) Payment to medical fund

Some adjustment must undoubtedly be applied to the Washington budget since prices are appreciably higher than in Montreal. However, even if the average were 25 per cent. higher the total budget, repriced, would cost \$86.30.

Judging by these standards, groups receiving aid from the private agency, compared to families on City relief, are better off in several respects; in housing, in clothing, the possession of gas for summer cooking, and other provision for sundries and emergencies. Clothing is in practice distributed by a special branch of the Association and not placed in the budget as a specific charge. Medical care, since it can be and is secured through other agencies, should be considered for the present comparison as raising the budget in column 3; while, since a margin is provided by a specific sundries allowance,

¹ *A Suggestive Budget for Families of Low Income* Washington Council of Social Agencies, 1101 M. Street Northwest, Washington, D C (1934). An even more detailed compilation is the *Chicago Standard Budget for Dependent Families, 1937* (Council of Social Agencies, Chicago, 1938) As far as can be judged, its levels are fairly close to those of the Washington budget.

the food budget might in practice be somewhat more ample, in comparison with the City scale, than the figures indicate. For the family on city relief, expenditures on sundries must be made (unless some small earnings are available) at the expense of food.

THE ADEQUACY OF FOOD ALLOWANCES

It will be remarked at once that monetary payments give no guidance as to the items intended to be included in each part of the budget, a matter which for food particularly is of vital importance. In the United States analyses already referred to, careful attention has been given to this, not only for the relief-level or "emergency" diet, but for other levels of income. The Stiebeling-Ward budgets are set to four standards, characterized as (1) "liberal" (2) "moderate-cost adequate" (3) "minimum-cost adequate" and (4) "restricted diet for emergency use". The foods making up the last-named budget are shown in the Appendix¹ for a family of five with relatively small needs; namely, a moderately active man and woman, a girl aged between 11 and 13, a boy between 7 and 8, and a child under 4. Priced at the average of the maximum and minimum prices registered in Canada during 1936, this budget for a year would cost \$322.16, or \$310.76 if cod liver oil is omitted.² The latter sum is equivalent to \$25.90 a month. Its relation to the "adequate minimum" diet is shown by the following table:

MONTHLY FOOD BUDGETS (AVERAGE 1936 PRICES, CANADA)

Members of the Family	Restricted Emergency Diet	Adequate Minimum Diet
Moderately active man	\$6 89	\$9 08
Moderately active woman	5 58	7 64
Girl aged 11-13	5 19	6 85
Boy aged 7-8	4 80	6 22
Child under 4	3 44	5 38
Total food allowances	\$25 90	\$35 17

¹Table IX, p. 233. Detailed and authoritative minimum budgets are available from British sources (e.g., in the British Medical Association's *Report of the Committee on Nutrition*, 1933), but American budgets have been chosen for Canadian pricing as the foodstuffs and dietary habits are more comparable.

²Cod-liver oil is recommended as essential by the Bureau of Home Economics and by the Ontario Medical Association but, as they point out, may be much more cheaply purchased in bulk and distributed as a medicine. In what follows (all tables except Table 58), it is important to remember that the lower figures which are used assume that this means of securing cod-liver oil for children is available.

Several tests were made on the basis of the price data published in the *Labour Gazette*, to compare Montreal prices with average Canadian prices thus computed. These showed that the latter are slightly the higher, but not more than 30 cents a month for the emergency-level food budget of the family concerned. Even without reference to certain further qualifications not yet considered, therefore, on a conservative estimate the Montreal relief food allowances (Table 56) are fifteen per cent. too low.

It must be pointed out, however, that many families of five would call for higher minimum requirements. For example, a boy aged over 15, a girl over 13, an active man or woman, would raise the caloric minimum appreciably—all of them together, as much as 30 per cent. (cf. p. 170). In cost, it would be reasonable to allow at least another 10 per cent. as a margin to take care of such variations.

It is even more important to understand the nature of the relief-level budget. The Bureau of Home Economics recommends the emergency standard "only when funds are insufficient to provide a fully adequate diet. It contains irreducible amounts of protective and other foods below which it is unsafe for diet to fall, and which may not be adequate for use over a long period of time". The compilers of the Montreal minimum¹ stated: "It will be noted that no provision has been made for health expenditures, doctors' or dentists' bills, medicines, etc., or for what has been called 'higher life' expenditures, i.e., life insurance, church and charity, books, magazines, postage and stationery. No amount has been allowed for the replacement of household linens or utensils, or for luxuries in the way of amusements of any kind. . . ." Also "the expenditures upon food should receive the greatest possible care, with a daily plan for well-balanced meals, and a wise selection of the foods most essential to health". The Montreal Nutrition Committee² specifically recommended their budget on the understanding that it was not to be used continuously for very long periods.

Comparison of the emergency food budget with the other Stiebeling-Ward standards is also indicative. Priced at average 1936 prices and for the same family of five as before, the relation of the four standards is as follows.

The "minimum adequate" standard which is here placed at 100, is the food budget recommended for five-member

¹ *Relief and the Standard Budget*, p. 2

² *Minimum Food Budgets to Maintain Health (op. cit.)*.

families with an annual income of from \$1,200 to \$1,800,¹ i.e., a very representative group, at least for urban areas. This involves an expenditure for food requiring from 30 to 40 per cent. of the total income. Such a proportion is not excessive,

Food Standard	Index	Monthly (1936)
I Liberal	145.2	\$51.07
II Adequate, moderate	115.1	40.48
III Adequate, Minimum	100	35.17
IV Restricted, emergency	70.5	25.90

though some authorities would regard it as high for the lower groups. This budget (III), not the lowest one, is regarded as the minimum covering "requirements for maintenance and growth over an indefinite period, furnishing a small margin of safety in nutritive essentials, and "permitting a limited choice as to quality". The emergency diet is nearly 30 per cent. below this level and, for all practical purposes, allows no choice.

OTHER RELIEF STANDARDS

Two Canadian compilations which have been undertaken specifically to set standards for relief budgets help to add to the data at this point. An enquiry which has had wide application is that which was made by a special committee of the Ontario Medical Association in 1933.² The committee's report examines the necessary minima in respect of all nutritive requirements, and lays down standards (based in part on those of Stiebeling and Ward) adapted to a scale which separates eight categories of individuals according to age and sex. The food budgets in which these result for representative families of five, showing also the division between types of foodstuffs are shown in Table 57. The view of the Committee

¹Cf. *Diets to Fit the Family Income* U.S. Department of Agriculture, Farmers' Bulletin No. 1757. The statement in the text above is an adaptation to Canadian conditions of compilations of the type made herein.

²Report of the Special Committee on Relief Diets. Published in the *Bulletin of the Ontario Medical Association*, Dec 1933, pp 6-17. A valuable and comprehensive report on methods of relief administration was prepared previously, in July 1932, by a provincial Advisory Committee on Direct Relief (W. R. Campbell, chairman). This included food-scale recommendations, though the latter were not based on actual diet calculations. For a family of five the amount recommended was \$5 a month, which was later raised by 10 per cent., then 25 per cent., because of rising costs of living. The higher figure (\$6.25 a week) represents \$27.08 per month for food.

was that these standards are necessary "to conserve the health and vigour, to promote resistance to infection and disease, to provide for normal growth in the young, and to keep the recipients fit to undertake work when it becomes available".¹

TABLE 57 COST AND CONTENT OF MINIMUM FOOD BUDGET
AS DETERMINED BY A SPECIAL COMMITTEE OF THE ONTARIO
MEDICAL ASSOCIATION, 1933

	Families of Five *		
	A	B	C
Weekly cost	\$5 29	\$6 59	\$7 07
Average monthly cost	22 92	28 56	30 64
Proportions spent on			
1 Milk	40 0	23 2	21 7
2. Fruit, vegetables	14 9	16 0	15 5
3 Protein	12 4	18 8	19 2
4 Cereals	14 7	19 8	20 5
5 Fats	10 0	13 9	15 2
6 Sugars	7 5	8 2	7 6
Total	100 0	100 0	100 0

*Two adults plus children aged (A) 2 months, 3 years, 5 years; (B) 8 years, 11 years, 14 years, (C) 13 years, 15 years, 18 years, respectively

The figures given above are those of the Committee's report, which apply to the latter part of 1933. But since this date retail food prices in Canada have risen more than 20 per cent.² Even if it is assumed that prices of foodstuffs of the qualities likely to be purchased by relief families have risen only 10 per cent. this raises the two smaller of the 5-person budgets to \$25.21 and \$31.42 respectively. Moreover, these schedules allow a maximum of less than fifty cents a month for tea, coffee and condiments as compared with nearly \$2.00 in the Stiebeling-Ward budgets.³ In Ontario, the actual allowance

¹ In the *National Health Review* (Oct 1936, p 74), however, it is stated that the caloric requirements allowed for men are lower than in the Stiebeling standard "due to the fact that this is a relief standard where the head of the family is not working". This is important in the light of the point made in the present text, p. 171.

² Table VIII, Appendix.

³ If a relief budget makes no allowance at all for these items, other foodstuffs are certain to be sacrificed for these small "luxuries". From some relief budgets, items such as soap, matches, cleansers, etc may have to be bought, at similar cost. If this is the case, it is yet another reason for the necessity of a margin.

paid (cf. footnote, p. 166) has obviously varied in adequacy very considerably between families of different composition.

In the Prairie Provinces an Inter-Provincial Nutrition Committee was set up at about the same time as the committee in Ontario, to draw up minimum food schedules for relief budgets. Space does not permit reproduction of the details, but in the main the typical Inter-Provincial budget compares closely with the Stiebeling and W.P.A. standards in all but two respects; it is built on a considerably ampler supply of bread, potatoes and meat, and includes less fats and sugars. Valued at mid-1936 Canadian prices, this budget for a family of five costs \$28.85 per month, at Montreal prices the same minimum would require \$27.56.

ASSESSMENT

Judged by the food allowance alone, an examination of the most relevant approved minima discloses a notable measure of agreement on about \$25 to \$30 monthly as being the lowest amount at contemporary prices which will support health and nutrition in an average Canadian family, *for short periods*. Higher ones are indicated as soon as other reasonable contingencies and human needs are taken into account. Other family units (including single men and women) have not been considered, and require separate evaluation; but by the most conservative comparison the sample examined rates Montreal food allowances as fifteen per cent. deficient.

What applies to Montreal is not necessarily true for the country as a whole. The following table shows the food allowances for families of five which were current in the principal city of each province except Prince Edward Island, in the autumn of 1936. A few differences of regulations and procedures render these figures not completely comparable, but the chief correction needed is for differences in local costs of living. A direct means of allowing for this is to compare the actual grants with the cost of the commodities in an appropriate standard budget (in Table 58, the Stiebeling-Ward emergency minimum), valued at the local prices ruling in the city concerned. This has been done, taking the prices of October 1936, with a few estimates, in the second column of the table. The numerous points of qualification which have been noted above must be remembered in interpreting these indices. (As the figure for Montreal shows, in comparison with the Table on p. 164, an important additional considera-

tion is that average prices for a full year would be appreciably higher). In only one of the cities listed the relief budget allows a sizeable margin (of 20 per cent. in Edmonton); there is a small margin of about 4.5 per cent., at October prices, in three cities; while the allowances in the four Eastern cities would not be able to buy all the commodities of the standard minimum. Without pursuing the subject farther from this point,

TABLE 58 MONTHLY FOOD ALLOWANCE FOR A FAMILY OF FIVE
IN SOME PRINCIPAL CITIES, 1936

City	Relief Ration	Cost of Minimum Standard at Local Prices (Approx.)*
Vancouver	\$26 09	\$24 33
Edmonton	29.25	22 75
Regina	25 35	23.73
Winnipeg	24 98	23 64
Toronto	23 92	25 11
Montreal	21 88	23 21
St. John	16.47	23 66
Halifax	15 25(a)	23 76

(a) \$14 53 plus a varying milk ration, estimated here as averaging 72 cents in cost. Both Halifax and St. John allowances assume that some garden produce may be available.

*These budgets include cod-liver oil (cf. p. 164, footnote)

this compilation is sufficient to show that Montreal is not an isolated case, and also that the variation in relief standards across the country is itself wide enough to demand considerable investigation.¹

In final assessment, it is well to reiterate that "adequacy" cannot be measured merely in terms of a fixed monetary sum. A monetary allowance, even if it has proper relation to local costs, gives no assurance that it will be spent in the same way as the original minimum calculation. This is

¹ Rural standards, in this as in other matters touched on in this book, constitute a special branch of the enquiry. The following figures (taking again a family of five and the year 1936 as representative) may be quoted, however. They show the maximum monthly food allowances in rural municipalities, villages, and unorganized territories in those provinces which have standard schedules:

Ontario	\$27 08	Manitoba	\$13 15
Nova Scotia	21 66	Saskatchewan	16 50
British Columbia	25.00	Alberta	22 60

Municipalities may in exceptional cases, at their own cost, grant more than the provincial standard, quite commonly the rates are lower. Deductions are made by specific schedules in the Prairie Provinces where foodstuffs are available on the farm.

made essentially by selecting, often down to small fractions, the most economical means of providing nutritive elements, and many of these may not be known or available to the ordinary purchaser. Important as the right choice of foods is, this is not the sole problem. The cost of a budget depends very much on the quantity in which it is bought. It is often pointed out in compiling minimum schedules that considerable economies may be secured if the commodities are bought in bulk. But the converse is often more likely: the small quantities which hand-to-mouth budgeting force the poorest housewives to buy are often more expensive than the retail purchases of the middle-income groups who can afford larger units.

Another weakness of fixed food allowances for families or "ration units" of given size, treating each individual as one, is that they are unadapted to the real differences of nutritional needs which depend on the age and sex of the members of the family. A further citation from the report of the Ontario Medical Association Committee illustrates this very clearly.

TABLE 59a CALORIC REQUIREMENTS OF INDIVIDUALS
(ONTARIO MEDICAL ASSOCIATION RECOMMENDATION
FOR RELIEF BUDGETS)

Age or sex group	Calories (daily)
(1) From birth to end of 6 months of age	720
(2) From end of 6 months to end of 1st year	1,000
(3) From end of 1st year to end of 5th year	1,500
(4) From end of 5th year to end of 10th year	2,000
(5) From end of 10th year to end of 13th year	2,500
(6) From end of 13th year to end of 18th year	3,000
(7) Adult female	2,500
(8) Adult male	2,800

A point of particular importance which this schedule recognizes concerns the special food needs of adolescents, which may be actually greater than those of adults during the principal growing years from 13 to 18. The American standard budgets previously referred to¹ are even more detailed:

¹W.P.A. (Division of Social Research) Bulletin 21 (cited on p. 161).

TABLE 59b. CALORIC REQUIREMENTS OF INDIVIDUAL
ACCORDING TO AGE AND SEX

(W P A Cost of Living Studies, United States)

Individuals	Calories (daily)	
	Emergency Standards	Maintenance Standard
Child under 4 years	1,085	1,393
Boy 4-6, girl 4-7	1,564	1,728
Boy 7-8, girl 8-10	1,995	2,135
Boy 9-10, girl 11-13	2,205	2,436
Boy 11-12, girl over 13	2,335	2,634
Boy 13-18	3,127	3,469
Man, moderately active	3,021	3,385
Man, very active	4,286	4,660
Woman, moderately active	2,335	2,634
Woman, very active	3,127	3,469

With only two exceptions, these caloric standards are higher than those adopted by Ontario.¹ This schedule shows, furthermore, that to raise diets from emergency to maintenance levels, an increase is required in the quantity or energy-content of food, of over 20 per cent. This is a fundamental point. "Followed over a long period, the practices called for in the emergency budget may prove harmful to both health and morale."² In other words, if it does not fall short on the counts previously mentioned—this scale of living may be accepted as a short-period exigency; but it cannot be justified as a permanent or long-period situation. Not only health but employability can be impaired. If the relief population are regarded as eventually returning to employment (as under any constructive policy they must be regarded) the standards must be raised after the lapse of a given period—even if employment is not immediately available. If a man who has been unemployed for a long period is employed on a works project at relief rates of pay, or gets a job which offers only slightly better pay than relief standards, his physical capacity may quickly be overtaxed.

¹The League of Nations report, referred to above on p 160, also recommends standards higher than those of the Ontario schedule. Scales on which many enquiries in Britain (including the New Survey of London Life and Labour) are based require 3,500 calories for the standard adult. The British Medical Association postulates 3,400, to allow for 3,000 being retained after preparation and digestion, as necessary to maintain average working capacity.

²*Op. cit.*, p. 3.

In the light of the material discussed in this and the preceding chapters, some of the conclusions put forward by a committee which was appointed in 1936 to prepare a report for the British Commonwealth Scientific Conference on the status of nutrition in Canada seem, to say the least, unduly optimistic, and open to re-examination:

- “(1) There is an abundance of food of different varieties sufficient to give balanced diets containing all essentials.
- (2) These can be provided under the existing government rates of assistance to families of the unemployed
- (3) Economical menus or diets, adequate for the maintenance of health, have been suggested for the use of people of all ages
- (4) There is no evidence of increased incidence of nutritional ailments among the children since 1929. . . .”¹

The availability of national food supplies, carefully calculated relief minima, even the increase of dietetic and medical services, important as all these are, are in themselves no bulwark against poor nutrition. Existing relief budgets and living conditions offer too many loopholes. The ill-health and poor nutrition among unemployed families, which is only gradually becoming better measured, cannot be dissociated from doubts as to the adequacy of relief levels. The need of a margin in the income available, as against the closeness of calculation required at the subsistence level, is a need of far-reaching implications. The fact that relief allowances approach the wages of unskilled workers, and even overlap in certain circumstances, makes the question wider and more serious in its reference than to the relief population alone.

¹*National Health Review*, Ottawa, Oct. 1936, pp. 58-94. Subcommittee on Nutrition, British Commonwealth Scientific Conference (Canadian Preparatory Committee).

PART V
THE PROVISION OF MEDICAL CARE

CHAPTER 21

MEDICAL PROVISION FOR THE UNEMPLOYED: EASTERN CANADA

IF A REVIEW is made of such medical facilities as are at present available for unemployed persons and families across the Dominion, two facts emerge most saliently. The first is the remarkably unequal character of such provision; the second, the lateness with which any general arrangements at all were instituted. This review refers of course not to basic public health measures, tuberculosis and communicable disease prevention services, etc., but to the types of illness which would normally be dealt with by the general practitioner; and to child ailments, maternity nursing, dental, optical and surgical attention which though special in character are needs of wide incidence, more particularly among families who continuously or intermittently fall upon the relief rolls in a period of depression. Of all the provinces Ontario alone at present has a standard publicly-supported system, specifically organized for the relief population,¹ and applied to all rural areas as well as the towns and cities. The amount of systematic coverage is high also in British Columbia, by reason here of the province's recent reorganization and improvement of its health services in general. In the Prairie Provinces the prior participation of the provincial governments in several basic health services, and the necessity of their taking a larger share of responsibility in relief administration, have combined to produce a fair degree of standardization. Medical provision in the West, however, still varies appreciably between the larger cities and towns, in which most of the unemployed are concentrated. In Quebec and the other easternmost provinces there are no standard arrangements, apart from Montreal and other cities. Whether medical needs are given special attention or not is a matter of local initiative, and in only a few cases (except for hospital and clinic services in which the provinces almost universally participate) is medical care more than an incidental of relief administration.

¹With certain exceptions (cf. p. 180).

But even in the largest cities, two or three winters of unemployment were experienced before some recognized procedure was established. In the West, because of the earlier onset of distress due to drought, medical care for those on relief became generally available as early as 1931 or 1932, but elsewhere the date is 1934 and later. The Ontario system was not instituted until the spring of 1935;¹ the extension of British Columbia health services began in 1934. Specific medical relief schemes instituted in Winnipeg and Vancouver date from 1934, and in Montreal, mid-1936.

In the absence of any other organization, the extent to which proper medical attention has been received by the unemployed depends on two sets of conditions. The first is the existing medical and health facilities which are open to the low-income groups in the community. Hospitals, clinics and sanatoria are the chief of these institutions, supplemented by private social agencies (Family Welfare, V.O.N.,² Red Cross, etc.) whose services are of considerable extent in some areas and much more limited in others. The other is the nature of the relief system itself. In the early years of the depression, *unemployment*, i.e., involuntary loss of work or failure to find it because of depressed business, was not distinguished from *indigence* or *destitution*, i.e., a state of need which might arise from many causes, personal or social (old age, widowhood, desertion, sickness, physical handicap, etc.) besides that of "the state of trade". There are still many regions in which this vital distinction is blurred or inadequately recognized, and it is only since the advent of the Federal Employment Commission, in 1936, that the first steps have been taken by the Dominion government in classifying the relief population by types and causes,³ and separating remedial measures and administrative requirements accordingly. Thus, during the greater part of the depression, the principal aid extended to the unemployed has been little more than general poor relief financed on a national scale.

¹The Campbell report recommended that emergency medical services should be part of relief provision as early as 1932, and considerable sums were spent on doctors' fees (at "cost" rates) in the ensuing years.

²The number of free visits made by Victorian Order of Nurses in Canada was 49,000 in 1929; in 1937 the number was 349,500. (380,100 paid or partly-paid visits were also made. The combined total applies to 84,100 cases in 1937.

³National Employment Commission, Ottawa: Information Service Leaflet No. 1, July 1937. Cf. also Marsh. *Employment Research*, pp. 35-45.

It has been subsistence to indigents rather than maintenance to normally employable wage earners regarded as such. The influence this has had, both on the organizations set up to deal with "unemployment" and on the unemployed themselves, is too wide a subject for the present book. What it has meant for health and medical care, however, is very clear. The unemployed increased enormously the demand for free or subsidized services, which even in ordinary times are not available on a sufficiently comprehensive or systematic scale. Secondly, a large volume of gratuitous service has been given by private physicians; as this has increased to altogether unfair proportions in many areas, it has been one of the chief facts making apparent the need for an organized system. A third result is of most significance for the unemployed themselves, and for other low-income groups. So far as medical care is left to be provided only through "pre-depression" institutions for the destitute (whether municipal relief shelters, casual wards, overseers of the poor, or charitable hostels, church organizations, etc.), the criterion for the receipt of free medical care has come to be not so much sickness as indigence, i.e., complete lack of means. Medical care in such circumstances is often, though not always, of the barest minimum character. None the less, this development has placed an important group, that of low-income families which are more or less self-supporting but unable to provide for proper medical expenditures in their budgets, at an unfair disadvantage.

The implications of the latter situation are considered further in the concluding chapter. The consequences in the two first-mentioned directions are much better known, and some action to deal with them has been registered in most areas where unemployment has been heaviest. Prior to 1935 the expedients adopted by municipalities which abandoned a *laissez-faire* policy were in the main of two types. Either one or more doctors (and occasionally, nurses) were retained on a salaried basis by the city for full-time medical relief service. Or doctors were permitted to submit special accounts to the city for medical services rendered to patients on relief, usually at a low rate and with a proviso limiting the total amount per month (typically \$100) which might be billed by any one doctor. The latter allows free choice of doctor within certain limits, whereas the former does not. Both these systems were

in operation in Ontario before the first province-wide compulsory scheme was instituted here in 1935.¹

THE ONTARIO MEDICAL RELIEF SCHEME

The system of medical relief now in operation in Ontario is the largest-scale organization of medical services for a particular section of the population in the Dominion, and will remain so unless or until health insurance is inaugurated in British Columbia or elsewhere. The system was started in March 1935, being made compulsory on all urban and rural areas in the province, and succeeding any previous arrangements made in particular municipalities. While its organization comes under a Provincial department, the scheme is essentially sponsored by the Ontario Medical Association. The department is not, as might be expected, the Department of Public Health but the Department of Municipal Affairs and Public Welfare.² The O.M.A. undertook the detailed administration of the scheme, and, through its committees, is the principal recipient and disbursing officer of the government grant. The Ontario Retail Druggists' Association also participates through agreements with the Medical Association, on the basis of which all medicines are provided. A special Medical Relief Division has been set up within the O.M.A., with its own Board or Management Committee, which issues a separate Annual Report on the working of the scheme.

The chief principle of the plan is one which has become familiar to a growing number of medical men in the last four years. A flat-rate scale of fees is approved—in Ontario, \$2 for an office visit, \$3 for a home visit, and \$25 for maternity care—which is billed by the doctor for services rendered to relief patients.³ His gross account at the end of the month (when approved) is then paid not in full, but in proportion to the total funds available. If all doctors' bills in a given month amount to \$4,000 and the government allowance is only \$2,000, the doctor whose bill is \$120 receives \$60, and so on. The limit in the present Ontario scheme is set by the subsidy-rate of

¹In some cities (e.g., Ottawa) previous local systems were preferred, but abandoned in the interests of uniformity of provincial provisions.

²This creates the anomaly that medical services to relief patients are administratively divorced from provincial and local clinics, hospitals, and boards of health.

³The scale most generally paid from 1932 to 1935 was one-half of this. A mileage-rate for travelling expenses, which varies from 25 to 50 cents according to the district, is also allowed in the new Ontario scheme.

35 cents per month for every person on relief. This was raised early in 1937 from the rates of the first plan, which allowed 35 cents per capita for the more sparsely populated northern regions (where the province had already assumed the greater proportion of relief costs), and only 25 cents per capita in southern Ontario.

In one sense this is not far removed from arrangements which had been previously operated with varying degrees of satisfaction, and which still obtain in some parts of the Dominion, i.e., the agreement of certain doctors to give their services to relief patients at specially low rates; for in its present working, the doctor knows that in the majority of cases he will receive something less than the agreed standard fees for his work. The difference rests in its much more systematic organization, including a somewhat more reasonable financial basis which has a fixed relation to the size of the total "liable" population. It differs from health insurance particularly (a) in not providing a full reimbursement at an agreed flat rate subject to no reduction and (b) in being restricted, by the nature of unemployment relief, not merely to the indigent but to those currently on relief rolls. This and other important points are referred to again later.

The regional unit of administration is a Medical Relief Committee. This is composed usually of from three to five physicians (appointed with the approval of the local Medical Society), a representative of the Druggists' Association, and the local Relief Officer. The committee as a whole is approved by the Medical Relief Board and by the Minister of Public Welfare.¹ With a few exceptions, the county offered itself as the most suitable organization-unit in the first place, and over 90 county committees were formed in 1936. Already, however, the experience gained has been sufficient to indicate many avenues to greater efficiency and economy, and local Committees have now been reduced to less than fifty. Moreover, eleven central District Committees have been set up, which perform the principal executive duties. Further improvements through pooling are also being actively considered by the Management Board and canvassed within the medical profession.

The principal function of local committees is to scrutinize the accounts, which are submitted monthly by all doctors

¹ It may be noted that local health authorities are not directly represented, and that approval is provincial although municipalities share part of the cost

and druggists within the area who elect to work under the plan. Discretion as to allowance of charges for special services, medicines, etc., is largely left to these Committees.¹ Regulations relating to the provision of drugs have been drawn up by the Retail Druggists' Association in collaboration with the Medical Association, and a fairly generous standard Pharmacopoeia is available. The payment of druggists' accounts is on a *pro rata* basis similar to that for doctors' accounts, with the limit set by the present agreement that 6 cents of the 35 cents per capita grant are set aside for these expenses. (This represents a slight upward revision from the initial agreed proportion, which was 16 per cent.) When approved, both medical service and prescription accounts are passed on, not directly to the Provincial government, but to the (O.M.A.) Medical Relief Board, who authorize the final payments.

The participation of the municipal authorities is of course an integral part of the mechanism. The municipal relief office makes a certified statement of the number of persons on relief in the area concerned during the month, which is a basic datum in the accounting. It also issues cards or other suitable documents to the person on relief who applies for medical care: these are retained by the doctor he chooses and submitted eventually along with the doctors' accounts. The municipality in rendering its relief accounts to the provincial government includes a separate charge for medical services and supplies, at the flat rate of 35 cents for each person on relief, in addition to its other accounts (for food, fuel, clothing, etc.), and this part of relief costs is paid in full by the Province.

The recipients entitled to benefit under this scheme are all persons on relief, including single men and women falling within such categories as are accepted by the municipalities, and the families of married persons in all cases. This means that eligibility for this medical care is coincident with eligibility for direct relief, i.e., the satisfaction of the local tests of need, and of residence requirements. The status of transients and of persons who have just come on or off relief, in particular may not always be clear; while families who are not able to

¹The best means of providing a final Court of Appeal on disputes is not yet regarded as proved, though the weight of evidence appears to be that the regional Committee, because of its knowledge of local conditions, is a satisfactory body for this function.

pay for medical care, but who are not on relief, are completely ineligible. These considerations apart for the moment, however, a very large quota of about 50,000 persons a month (adults and dependents) have been receiving medical attention under the Ontario scheme since its inception ¹

Commendable efforts are being made to compile complete information on the working of the scheme, and the value of the

TABLE 60. SOME SELECTED ADMINISTRATIVE STATISTICS OF THE ONTARIO MEDICAL RELIEF SCHEME, 1936-7*

Region	Total Number on Relief	Number of Patients	Morbidity Rate	Doctors' Gross Accounts (yr)	Percentage of Accounts Paid	Average Monthly Amount Paid to Each Doctor
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Main cities</i>			%		%	
Toronto 1935-6	108,021	14,535	14.6	\$870,771	32.1	\$45.01
1936-7	81,163	15,003	18.5	723,617	26.8	33.23
Hamilton 1935-6	20,702	2,853	13.8	117,776	49.7	39.67
1936-7	18,046	2,420	13.4	101,495	42.7	32.85
Ottawa 1935-6	20,065	2,999	14.9	122,470	45.3	37.92
1936-7	18,485	2,861	15.5	101,456	42.8	31.94
Windsor 1935-6	24,343	3,592	14.8	149,584	44.8	33.88
1936-7	21,380	3,050	14.3	136,985	36.5	39.16
London 1935-6	7,750	1,085	14.0	52,424	41.0	24.71
1936-7	5,965	938	15.7	42,837	32.6	17.87
"Old" Ontario 1935-6	337,362	45,322	13.8	\$2,329,834	38.1	\$31.14
1936-7	263,499	40,470	15.4	1,939,104	32.9	24.37
"New" Ontario 1935-6	70,859	5,431	7.7	302,139	100.0	132.98
1936-7	64,645	6,688	10.3	347,170	69.9	98.02
Total Province 1935-6	408,221	50,753	12.8	\$2,631,973	45.2	\$38.65
1936-7	328,144	47,158	14.4	\$2,286,274	38.5	\$30.72

Source: Extracted from Annual Reports of Medical Relief Board, Ontario Medical Association, 1936 and 1937

*Average for month for all figures except doctors' gross accounts for the year (column 3).

¹The *potentially* eligible population, i.e., all wage earners liable to appreciable unemployment, plus their dependents, is over one million, but only 30 to 40 per cent. of these are on relief.

experiment both from the point of view of administrative experience and of social welfare, seems to be realized by all concerned. Only a few of the more indicative figures are included in Table 60. Some 2,500 doctors are now participating, in about 600 municipalities throughout the province. The cost for the year, of medical accounts only, was \$1,190,200 in 1935-6 and \$996,400 in 1936-7. Administrative expenses vary somewhat from region to region and are higher particularly in the northern districts, but their ratios to all funds were 2.6 per cent. and 2.3 per cent. respectively in the first two years of operation. The average number of patients coming under the care of a doctor has been between twenty and thirty, and the average net amount paid per doctor, between \$30 and \$40 per month in the larger centres of population. These figures need to be further refined,¹ but even allowing for this, they contribute some specific information which will be of much value, in comparison with public health expenditures and projected health insurance finances, when the reorganization of Canada's "health bill" comes up for consideration.

The Medical Relief Scheme provides only for sickness which can be treated by the general practitioner, for standard medicines, and for one special service, that of maternity care. Ailments which can be treated by "household remedies" do not come under the scheme. Items from an approved list of the simpler medicaments can be secured from the relief authorities and deducted from the food voucher. Hospital treatment still depends on the availability of clinics, free wards in the hospitals, and charitable agency services. Under the terms of the Hospital Act (1935) the Province at present subsidizes "free" cases in hospitals to the extent of \$~~1.75~~^{0.25} per patient per day, plus certain surgical and laboratory fees. To this most Ontario cities contribute a further sum (in Toronto, an equal grant of \$1.75). Free cases for hospitals and other institutions are accepted as such only after investigation of the financial circumstances of the applicant, and only of course so far as beds are available. Dental and optical

¹ The fact that confinement cases are included with all other kinds of sickness is an example. This distorts the "morbidity rate" based on the proportion of patients to the total on relief, and also the financial averages, since the fees are much larger for confinements than for home and office calls. Judging from the figures as far as this is possible, between 11 and 12 per cent. of the total patients are maternity cases. The misleading total of "patients", since these figures include many duplications in the course of the year, is another example.

care for the relief population has not been fully accepted as a provincial responsibility anywhere in Canada, and conditions vary from city to city. Toronto and the other largest urban centres have made arrangements with the local Dental Associations in recent years. Some of these are more limited than others, but usually they provide for teeth extractions only, at reduced fees which are paid wholly by the city provision for fillings, bridge-work and other dental work is exceptional. The cost of glasses is assumed as a relief charge, only where the need is serious enough to cause ill-health; this appears much less commonly than dental care among the charges accepted by the relief authorities.

MEDICAL SERVICES IN QUEBEC

As a matter of provincial administration, relief provision for the unemployed in Quebec is confined to food, fuel,¹ shelter and clothing allowances. Apart from agreements made with the Dominion Government under the Federal Relief Acts, the central statute conditioning Quebec public welfare services is the Public Charities Act, which defines the agencies eligible for subsidy from the province. This provides almost exclusively for institutional care, and equal thirds of the "standard" cost must be furnished by the municipality and by private charity respectively. For the purposes of this Act the unemployed on relief are regarded as equivalent to indigents, and on this basis they may secure free entry to hospitals and other medical institutions on terms similar to those described for Ontario.²

Otherwise, in the smaller municipalities and the rural areas there is no standard medical service for the unemployed. In a few towns and cities, the recurrence of sickness among the unemployed has led the authorities to incorporate some definite arrangements for securing medical care into their relief organization. The costs of this part of their relief budget must be met from municipal funds. In Verdun, which as the third largest city in Quebec and the largest satellite municipality in Greater Montreal has one of the major relief-loads of the province, responsibility for medical care has

¹ Allowances for light and gas are the responsibility of municipalities only.

² The total grant received by most Quebec hospitals is smaller. The over-all average in 1936 was about \$1 30 per day (*cf* Reports of the Director of Public Charities, King's Printer, Quebec). Moreover, the standard rate on which subsidies are based (e.g., \$2 per patient per day in Class A-1 hospitals) may be smaller than the actual cost per patient per day.

been accepted almost throughout the depression, but it is confined to cases of essential need. A system of the type which was followed in many Ontario municipalities prior to 1935, here obtains: a panel of doctors who agree to take relief patients has been formed, and these are paid at a flat rate of one dollar per visit. Besides general practitioner service and medicines, operations, glasses, dental extractions, etc., may also be provided in approved cases. The city's average monthly bill on this account was \$6,500 in 1936-7, covering attendance to about 3,500 patients.¹ In Westmount a special doctor is retained for relief patients; but in Quebec City, Sherbrooke, and Trois-Rivières, only hospital clinics or charitable agencies are, officially at least, available. In many towns, medical care is still left to the unpaid services of family doctors, with the municipality sometimes meeting the cost of medicines (as e.g., in Hull), sometimes making no undertakings in the event of sickness beyond the existing public health services of the City health officer, or facilitating hospitalization under the Public Charities Act.

The outstanding exception is that of the City of Montreal, which has now adopted a standard system modelled closely on the Ontario plan just described. The Montreal Unemployment Relief Commission² in June 1936 set up a Medical Relief Committee composed of seven doctors (nominated by a group of local medical associations), one druggists' representative, and certain relief officials. The schedule of "primary" fees for doctors' services is similar to that agreed upon in Ontario,³ but the financial arrangements differ in other respects. The medical fund is furnished in Montreal wholly by the City, and is fixed at only 25 cents for each registered person on relief. In the first year it was proposed that 80 per cent. (net) of the fund should be available for medical fees, 16 per cent. for druggists' supplies, and 4 per cent. for administration. A separate contract was negotiated with the druggists, which guaranteed that the minimum proportion of their accounts to be paid should be 40 per cent. This, however, resulted in so large a share of the funds being required for these costs that the percentage of physicians' accounts paid was unduly lowered. An attempt to secure a

¹ This compares with a medical bill of \$30,000-\$40,000 a month in Montreal City for an average of 21,500 patients a month.

² Formerly a quasi-independent body, this was reorganized as a special branch of the City Department of Health in June 1937.

³ The standard rate for maternity care was reduced to \$10 in September 1937.

different agreement with the druggists failed. At the end of 1936, accordingly, a revised system was considered and finally adopted. Now, instead of setting aside 80 per cent for doctors' accounts, the whole fund except the 4 per cent. for administration is made available, but with each doctor making his own arrangements with druggists for the filling of his prescriptions. In the Montreal scheme as now operating, therefore, druggists are paid by individual doctors¹ and not by the Committee as such. Other details, particularly those relating to the certification of relief patients, are substantially the same as in Ontario.² As in Ontario also the plan is being conducted as a serviceable experiment which deserves the interest and co-operation of the medical profession.

THE MARITIME PROVINCES

The basic situation in the Maritime provinces, which has determined in the main the limits of medical provision for the unemployed, is not unlike that of Quebec outside of Montreal, except that the Maritime Poor Relief Acts spring from the old English poor law rather than from the reliance on the church and private charity which are the principles underlying the Quebec statute. Unemployment in practice means a form of destitution, and those in need come under the care of the Overseers of the Poor in their districts of settlement. While Relief Committees were set up to supplement this framework in the main cities when unemployment increased after 1930, in most cases no specific provision was made for medical services. In the largest city, Halifax, reliance has been placed on the Health Clinic of the Dalhousie Medical School, and agencies such as the Visiting Dispensary and the Victorian Order of Nurses to which the city makes annual grants.³ As elsewhere under these circumstances, therefore, the swollen burden of medical care has been carried through increased work on the part of outdoor clinics, greater pressure on the public ward space of the hospitals, and the acceptance by doctors of many non-paying patients. Individuals or families

¹Doctors may themselves issue medicines which have been prepared for them by qualified druggists, but are not permitted to dispense their own drugs.

²The proportion of the relief population receiving treatment is somewhat higher, however, and the total number considerably greater. In 1937 the average number of patients varied between 15,700 (in July) and 31,600 (in February) or between 13 and 20 per cent of the relief population. Expenditures per patient are therefore lower.

³Some grants are also made from the city's community chest for free clinical services, etc.

who have not been able to have recourse to these may apply to the overseers, who are empowered to grant medical care (through a hospital, doctor, or other means) as well as material aid at the municipality's expense. The requisite, however, is investigation and proof of lack of means. A few volunteer relief panels (of doctors accepting a specially low fee for relief patients) have been formed, especially in the industrial districts.

In New Brunswick unemployment was dealt with by outdoor relief grants from the county or municipal poorhouses until 1933, when supplementary offices were set up under the Department of Public Works. In St. John and Fredericton orders on doctors in cases of medical need have been issued, and the costs met by the cities where these could not be "worked out" by a member of the family, but chief reliance has been placed on clinics, the V.O.N., etc. Since August 1936 unemployment has become closely identified with indigence again by the decision of the provincial government to discontinue all aid to direct relief. Contribution is now made only to works projects; any other form of unemployment aid, even more decisively than in Nova Scotia, is a municipal responsibility. In many centres even the Relief Offices have now been discontinued. Unemployed persons who cannot qualify for work relief must have recourse to the Almshouse Commissions. As in Nova Scotia, the chief municipalities have incurred increasing expenditures during recent years for nursing, dental and optical provision, etc., on relief account; and the finances of many hospitals have also been burdened by heavy proportions of indigent patients.

CHAPTER 22

MEDICAL PROVISION FOR THE UNEMPLOYED: WESTERN CANADA

IN WESTERN CANADA provincial responsibility in unemployment relief administration has been assumed more extensively and, typically, at an earlier date during the depression, than in Eastern Canada. Some of the reasons for this have already been suggested. The existence of much unorganized or sparsely-settled territory within the provincial borders is the one of longest standing, which has enhanced the need for provincial rather than municipal initiative in welfare services. The financial weakness of many municipalities even in some of the best settled areas in the last seven years, is the most recent—a situation which has established the principle by *force majeure*. Unemployment relief policies have been standardized to a considerable extent through direct provincial supervision of the municipalities, and some measures of inter-provincial co-operation (e.g., on food schedules) have been instituted. Throughout the West, the provincial governments have since 1932 or 1933 relieved the municipalities of the costs of relief to transients; in Manitoba the province now organizes all clothing disbursements; drought and farm relief, particularly in Saskatchewan, is administered centrally by the Province. It is thus only in the larger cities that major divergences of practice remain, but this is true especially in the direction of ampler relief provision, including medical service.

MANITOBA

In Manitoba, so large a proportion of the population is in Greater Winnipeg that this fact has always imparted special characteristics to the relief administration. Co-operation both between city and provincial authorities, and between public and private agencies is of long standing, and the capital has had a large influence in setting the standards for the province. The Greater Winnipeg Advisory Board on Unemployment Relief (which dates from 1932) is appointed by the provincial government. In the City of Winnipeg a separate Social Welfare Commission, composed of private

citizens and City council members, co-ordinates relief provision other than to the unemployed; and the Unemployment Relief Committee of the City government sits usually with the provincial Deputy Minister of Labour, the local superintendent of the Employment Service, and the chairman of the Social Welfare Commission as members.

A panel of doctors for persons on the relief rolls was set up in February 1934. A full-time Medical Relief Officer is also retained, who acts as a referee on points of dispute. Application to the Relief Office for a permit to consult a doctor may be made by married men for any member of the family, by women with dependents, and by some categories of single men (though these are usually special cases). Subject to the jurisdiction of the Medical Relief Officer, the choice of doctor is left to the patient. If necessary, house visits are arranged for, and nursing service can be secured if the doctor so decides. The city has contracted with the local Druggists' Association for the filling of doctors' prescriptions, but the Relief Department encourages as far as possible their restriction to a standard formulary drawn up for this purpose. As in Ontario, "household remedies" may be secured as part of the relief budget, and these are distributed through the Relief Office.

A Medical Advisory Committee, which reports to the Unemployment Relief Department, and is appointed by the Winnipeg Medical Association, helps to administer the scheme. The schedule of physicians' fees which it has approved is lower than in Ontario, with some important variations. One dollar and fifty cents is paid for a house call, \$1 for an office call and 50 cents for a hospital visit; there are two maternity fees, \$20 for a home confinement and \$10 for a hospital confinement. No doctor may claim more than \$100 in any month unless he has performed more than \$150 worth of services in which case he is paid \$100 plus sixty per cent. of the excess up to a maximum of \$150.

The supplements to general practitioner service are more extensive than in most other cities. A dental clinic has been established for the unemployed by arrangement with the General Hospital and the City also makes an appropriation for the cost of dentures. By a similar arrangement with opticians, glasses are also provided at city cost, provided an optometrist's test showing the need for glasses is submitted. Hospital charges including surgeon's fees for operations

certified to be necessary, are administered by a separate Department of the City. As in other parts of the Dominion provincial grants are made, on a per diem basis, towards the expenses of free beds. But under the provisions of the main medical relief scheme, the family doctor may continue to attend such cases in the hospital, and is paid for his visits at the agreed rate.

The statistics for 1935-6 record a total of 22,200 cases of diseases and ailments of varying seriousness, 3,630 operations, and 950 maternity cases among a relief population averaging 30,000 persons per month. These figures of course include duplications of several kinds, and a large proportion of the ailments are undoubtedly of minor character;¹ none the less, a considerable weight of sickness and other needs for medical attention is indicated. The expenditures made under the Winnipeg medical relief arrangement were \$106,700 in the year quoted, of which \$39,600 was for operations and \$10,500 for maternity care.

In the unorganized territory of Manitoba, medical attention for those on relief is financed by the province. Costs incurred on behalf of unemployed persons whose residence in a particular municipality is not established are similarly accepted. Otherwise whether a family on relief can secure medical attention, apart from hospitalization, depends on varying municipal arrangements. Thus in St. Boniface doctors are paid a small flat-rate fee, while Portage la Prairie maintains a city relief doctor. Where Health Units² have been established, their facilities are usually available. In Brandon, for example, the medical officer in charge of relief patients is also director of the Health Unit (which retains one doctor and three nurses). This unit in addition to its other work gives medical attention to some two thousand persons on relief per year. While this has helped to meet some of the needs thrown up by the depression, however, extra work without any increase of funds imposes a handicap on the pursuance of preventive and educative work which is one of the Health Unit's special functions.

¹18,650 of the total of 22,200 quoted above or nearly 40 per cent., are made up of two diagnostic groups—respiratory diseases and diseases and disorders of the digestive system. A much more detailed classification, which is not available, would be necessary for a precise measurement of the types of morbidity and their seriousness.

²Cf. p. 201, footnote 1.

SASKATCHEWAN

In Saskatchewan the drought situation overshadows the problem of industrial or urban unemployment. Almost from the beginning agricultural relief has been accepted as a joint provincial-federal charge. A substantial appropriation has been made available for doctors' and dentists' services (including mileage rates) for all persons on relief. The need for this would rapidly have become more urgent than it is but for the progress that had already been made in establishing the "municipal doctors" system which is now a characteristic of the province. Two types of plans have been in operation for over fifteen years, one or the other of which is followed in co-operating regions comprising some 140 municipalities and rural districts.¹ In about one-half of these, a full-time physician is retained at an appropriate salary (maximized by law at \$5,000), which works out usually at \$2 or \$3 per head of the population in the area concerned. This doctor serves all the residents of his district, and also acts as medical officer, organizing communicable disease control and allied public health work. In other districts a doctor and a nurse are subsidized by the municipality, up to a maximum of \$1,500 and \$1,000 per annum respectively. Through the union of districts into larger groups, similar co-operative arrangements have been applied to maintain hospitals (on the pooled proceeds of taxes) over a large part of the province. Finally, special maternity grants of \$25 per case are made by the provincial Department of Health, partly to mothers and partly to doctors or hospitals. In many districts even the relatively economical finances of these services have proved hard to find in recent years; but their value in helping to meet the special pressure of relief needs for which there might otherwise have been no provision, has been inestimable. Since 1934 an important means of provincial co-ordination has existed in the shape of the Health Services Board, whose function is to review the health needs of the province and to advise local authorities and other groups on methods for the equitable distribution of the costs of illness. Its personnel includes officials of the Departments of Labour and of Municipal Affairs, and the special needs of the drought areas are

¹ The system is made the subject of study from all angles in Publication No. 11 of the Committee on the Costs of Medical Care series (C. R. Rorem: *The "Municipal Doctor" System in Rural Saskatchewan*, 1931). A few areas also operate this system in Manitoba.

recognized in the inclusion of the provincial Commissioner of the Red Cross, which latter organization has been one of the principal relief agencies throughout the depression.¹

In most of the smaller towns the medical needs of unemployed persons have fallen to the care of the medical officers and municipal nurses, with the supplement only of larger subsidies to hospitals in some cases, and usually of a Relief Committee to assist in administration. The burden has been heaviest in Regina, where most of the "industrial" unemployment of the province has been concentrated, the number of persons on relief here in recent years being just under 10,000. After several expedients, the city's medical relief arrangements were put on a basis similar to that organized in Winnipeg, shortly after the change was made in the latter city. The chief difference from the Ontario system is that lump-sum rather than per-capita grants or subsidies are made throughout, and a few other administrative details are of interest. The city pays a maximum of \$2,500 monthly to the Regina and District Medical Society, or in effect to the Medical Officer of Health and his Advisory Committee of three physicians appointed by the Society, who administer the grant and scrutinize the accounts submitted by the doctors who have attended relief patients² in each month. In Regina the maximum amount receivable by a doctor in this period is \$100, and the relation of the total volume of work to the grant available has meant that only from 25 to 35 per cent. of the gross account is paid.³ Five per cent. of the total sums disbursed is allowed for administrative costs. Medicines are supplied under contract with druggists, as described elsewhere, and the standard formulary for the relief scheme is the same as that used in Winnipeg. (In Regina and elsewhere, the view has been expressed that this Pharmacopeia is inadequate.) Where a prescription is not covered by the formulary, it must be submitted to the Medical Officer for approval. A continuously large proportion of such medicines have been requested, though drug costs are high.

¹Important changes in medical subsidies in the province were made in 1937 which are described separately in Appendix B (p. 236).

²Certain other persons—old-age pensioners, and the wives and families of war pensioners—are included in this scheme.

³Standard fees are \$2 for office calls, \$3 for house visits, \$2 for hospital visits, and \$35 for maternity cases. For major operations fees are allowed up to \$100.

Grants have been made available since 1935 on a similar basis for dental and optical treatments (about \$250 a month for regular dental work, \$125 a quarter for special dental treatments, about \$200 a month for oculists) The local Dental Society, which receives the grant, retains a Dental Examining Officer who makes an initial examination of all relief applicants in need of dental services, and refers them thereafter to the dentist they select from the Society's panel, with a general specification as to the attention needed. For persons with visual defects, on recommendation of a physician, the city pays the oculist's fee (at special rates) plus a grant of \$2.50 towards the cost of glasses. Full costs are paid for school children, or if the individual's health and efficiency will suffer if he lacks glasses. In other cases extra exemptions on earnings allowances are made, or work is provided by the City, to enable payment for special optical or dental treatments.

Recommendations for admission to hospital or for operations are made to the Medical Officer. The latter may give his own decision or request an opinion from a referee; or he may submit requests to his Advisory Committee, which may also appoint a referee. Referees are paid a fixed fee of \$3.00 per consultation. Emergency operations may be performed without any recourse to this procedure, provided that the case history and full pathological findings are submitted later, the Advisory Committee's allowance of fees being then based upon these. over and above these arrangements for operations, the city pays the hospital charges at agreed rates for relief patients. The greater proportion of relief cases are sent to the General Hospital, which is city-owned, but a special appropriation is reserved for the (Catholic) Grey Nuns Hospital. Special cases of communicable disease are sent to isolation hospital; and as elsewhere in Saskatchewan tuberculosis cases are treated, irrespective of economic status, to the extent of the facilities provided by the Anti-Tuberculosis League organization.

ALBERTA

In Alberta, as in Saskatchewan, any municipality is empowered to appoint a "community doctor" or municipal physician, whose services are available to all residents of the district. Since 1934 also, the Provincial Public Health Act permits cities or urban districts to set up a Health Board

and establish a system of full-time health services. In the less organized regions, chiefly in the north, district nurses and travelling clinics have been instituted and financed by the provincial government for many years. Most of these resources have been drawn on by or for the unemployed. The two chief urban centres (Edmonton and Calgary) are of course exceptional, and here the large numbers dealt with by the Relief Commissions, as well as the existence of various private agencies, have led to the institution of some medical service specifically for persons on the relief rolls. Otherwise, failing the availability of public health personnel, the unemployed may only secure medical care on the same terms as indigents, since poor relief, which is the responsibility of all municipalities, is understood in the provincial statutes as including medicines, hospitalization, etc., besides food and shelter.

In one or other of these forms medical services where necessary have been provided since the early years of the depression. Only a few towns, however, have negotiated types of administration organized co-operatively between the relief department and the local medical association. In Edmonton a monthly-grant method has been considered but not so far adopted. The city simply accepts accounts, subject to review and veto, from any doctor who treats a relief patient, at rates of \$2 for an office call and \$3 for a home visit, with the proviso that only one call per patient per month may be charged for.¹ The individual goes not to the relief office but to the doctor. Bills for necessary operations and for dental work (limited to extractions only) are accepted, but not the costs of glasses, which must be met by the relief recipient. Medicines, if the individual cannot buy them, may be secured only through the City Hospital: a plan to establish a clinic as part of the Relief Department has not yet been brought into operation. An individual who is permanently or temporarily unemployable comes within the definition of "indigent" and may in these circumstances be attended by a City nurse. Hospital charges, however, are held against the patient, whether he can pay them at the time of admission or not.²

¹The review is made by a full-time doctor on the civic staff. Total costs in 1936 under this plan varied from \$2,500 to \$3,000 a month.

²Tuberculosis is an exception as the province has assumed the finances of all sanatorium and other tuberculosis services.

In Calgary the city makes a lump-sum grant to the city Medical Association of \$2,000 a month without accepting or receiving accounts from individual doctors at all, the administration being entirely in the hands of the Association. The cost of medicines is borne separately by the city, and appropriate cases of sickness are referred to hospital clinics. Special regulations have been laid down for glasses and other medical appliances. A certificate must first be obtained from a doctor; the city then meets half the cost, the other half being deducted in small instalments from the regular relief allowance. If the relief recipient can meet the full charges from earnings, no reduction is made in his relief scale.

While these arrangements are considerably better than no provision at all, they have several shortcomings in comparison, for example, with the Ontario organization. Another problem, of unemployment and medical relief alike, which has been voiced in Alberta though it is not confined to this province, is the difference in standards between rural and urban areas. If this is not more obvious in Saskatchewan, it is because the rural areas, even more predominantly important there, have received special attention, a fact which was marked by the appointment of the Saskatchewan Relief Commission for the province-wide handling of farm relief, as early as 1931. In Alberta the need for systematic organization which would render medical facilities and standards more equable as between regions has been made evident from various sources; the provincial Advisory Committee on Unemployment Relief recommended health extension services for this purpose in its first report in January 1933, and again in February 1934. Had the Health Insurance Act which was passed in 1935 been brought into operation, the co-ordination of services for persons on relief along with other medical facilities would undoubtedly have come up for attention; for the Act provided for a broad system of health services, financed on a three-party tax plan, to be made available for all established residents, employed and unemployed, rural and urban alike. It was held in abeyance after the change of government in 1935, however, and has so far not been rediscussed.

BRITISH COLUMBIA

In recent years British Columbia has taken a number of steps towards systematizing the relief machinery of its munici-

palities and rural areas throughout the province and raising their standards to uniform levels.¹ The provincial government already takes full responsibility for relief in unorganized districts, and for single men. For all unemployment assistance, also, the province is now divided into a series of districts, each of which has a provincial relief officer. Up to 1934 the inclusion of medical care in relief was a matter of municipal responsibility; but the Medical Services Branch of the provincial Board of Health now administers a special unemployment relief fund which is separate from other health accounts. Municipalities may receive grants-in-aid from this fund towards their expenditures on medical care of the unemployed.

Current improvements which are in progress or in contemplation apply to the mass of the wage-earning population rather than to the unemployed as a group. The pooling of municipalities and school districts, to enable health units with an adequate staff of full-time doctors and nurses to be set up, had made some progress before the depression, but a new drive to this end has been made since 1933. An important achievement was the establishment in 1936 of modern and unified health services for Greater Vancouver under a Metropolitan Health Board; and new units have also been set up in a selected pioneer region and a rural district. To provide a better service for the smaller towns, all social workers in the health and welfare services of the Province have been brought together in one group, and the new Welfare Field Service locates its "welfare visitors" at strategic points.² Hospital finances have been recast, and other welfare expenditures which have been falling too heavily on municipalities are under review. The administration and patient-loads of all hospitals are being surveyed, and an expert Inspector of Hospitals was recently appointed whose functions are not only to supervise the distribution of grants but to build up an advisory service in consultation with hospital executives themselves.³ A more logical division and integration of Welfare departments has been organized, and extensive

¹A notable step worth mentioning in itself is the passage of the Residence and Responsibility Act (in April 1937, not proclaimed at time of writing) which lays down uniform conditions determining eligibility for municipal assistance.

²This co-ordination has not yet been applied to Unemployment Relief Department workers.

³An example of changes already effected is the removal of chronic indigents from hospitals to maintenance with relatives or in boarding homes. The hospitalization-rate in British Columbia has been excessive, though unequally distributed.

improvements have been undertaken in the collection and analysis of records, reports and statistics, which are now centralized in the Vital Statistics Department.

These developments have not in themselves given specific attention to the medical needs of the unemployed as such. Many have undoubtedly benefited from the improved facilities available, while the unemployment aid machinery in several centres has been relieved of some of its non-appropriate burdens. Systematic coverage of the unemployed, however, (as also of the farm population) waits upon provisions such as were contemplated in the first draft of the Health Insurance Act prepared for the provincial legislature in 1935. In this scheme all indigents were to be included on the same terms as other insured persons, with their costs borne by the province. But the revised Act, drawn up after the sittings of a public Hearings Committee, dropped these clauses (although they were not advised against by the Committee) and limited the scope of the measure in other directions.

In the meantime provision for the relief population depends on the character of general public health services, plus the special arrangements for medical treatment in particular localities. In some of these (e.g., New Westminster) medical care still depends on clinics and social agencies. Victoria pays a fixed monthly sum to the city medical association for general practitioner services, and a special scale of fees for dental relief. The system in Vancouver deserves special note because this city was one of the first to establish medical care as an organized part of public relief.¹ A full-time doctor, nurses, and a nutritionist are members of the civic relief staff. A plan to provide maternity services for unemployed families was started in August 1933, with wider provision, including all basic medical services, following in January 1934. The general principle—that of a monthly grant to the local medical association which is disbursed pro rata to the doctors submitting accounts—has now been described several times. The financial basis differs from that of other provinces except Ontario, however, in that only 50 per cent. of the total grant (\$5,000 a month) is paid by the city, the other share being provincial. The contract with the Vancouver Medical Association provides

¹With Winnipeg and Toronto, Vancouver was also one of the first cities in Canada to accept public (municipal) responsibility for relief funds; the present civic Public Welfare Office, which administers other forms of social aid besides unemployment relief, dates back under a different name to 1914.

for both general practitioner and specialist service. All essential operations are covered, and hospital charges are met jointly by city and province. Dental treatment is limited to extractions, and glasses may be supplied free if recommended on grounds of health. The Relief Office has a standard pharmacopeia, arranges directly for the supply of medicines and meets this particular cost as a 100 per cent city charge. For home confinements, the practice is to pay the fees (billed at agreed standard rates) of a doctor and nurse; for hospital confinements one inclusive charge is made.

The records available show a monthly average of between 4,000 and 5,000 calls for medical attendance of all kinds except operations; a rate for Vancouver's relief population in recent years—about 30,000—of 1.5 calls per person.¹ This includes calls from both general practitioners and specialists, with the latter accounting for about one-tenth of the total. The total number of operations performed under the Vancouver scheme has been about fifty per month, or an incidence of 1.6 per thousand. In Winnipeg, which has a relief population of equal size, the rate for surgical attention is somewhat higher (about 2.0 per thousand). Operation rates cannot be compared very closely, especially so long as differences of practice prevail in the inclusion or exclusion of maternity cases. There is better evidence of what may be regarded as typical expectation for the number of attendance-calls per person. The Vancouver rate is not far from that for Winnipeg (1.6 in the period 1935-6, while the rates for calls of all kinds in Ontario were 1.6 per person in 1935-6 and 1.8 in 1936-7). The paucity of this kind of data makes these figures of interest, but for Vancouver as for most of the other city schemes, the statistical records are not extensive enough to enable a proper assessment of the amount of sickness or the efficiency of its treatment to be made.

¹Average of 1935 and 1936. The distinction between major and minor ailments, noted elsewhere, should also be remembered here.

CHAPTER 23

MEDICAL RELIEF: AN ASSESSMENT

THIS REVIEW of the general mechanism through which medical care is now available for the unemployed and other persons on relief is far from complete. A number of elements in the public health structure have received little or no mention. Much more might be written, for example, of the work of tuberculosis treatment and prevention, or of facilities for the examination of school children; but these have been omitted partly because they are special topics in themselves, and partly because, within certain limits, they are services made available without reference to economic status. Other incidentals apply more directly to the unemployed. Thus medical examinations are commonly conducted for applicants under the Farm Rehabilitation and colonization schemes, in some cities they may be requested by persons on relief, as a proof that they may legitimately refuse certain kinds of work on grounds of health or physique; in others medical examination is one of the tests under which single men may be accepted as a municipal responsibility. Again, many relief administrations now make some allowance for the inclusion of special diets in the food budget, although this is still not a standard practice and itself depends on the extent to which medical or nutritional advice is available. A more general but not universal practice is that of allowing extra milk for children and nursing mothers.

On the other hand, it has not been possible to assess properly the standards, and the completeness of coverage, of the various facilities which have been outlined. In the cities which now have subsidy-arrangements with local medical associations, a great deal of detailed information is still needed: on comparative costs, the types of sickness treated, the relative proportions of hospital, home, and general practitioner care, and related matters, but also on the quality of service received by persons treated under these schemes as compared with patients from other wage earner groups. Even in Ontario, with the important exception of Essex County,¹ the statistical records now being collected have several limitations.

¹ Cf. p. 205 *et seq.*

As these and similar figures relating to morbidity and costs of medical service, etc. are likely to be used more frequently in the future, it is important to point out the need for information on the social and economic background of patients coming under these schemes. The cumulative effect of subsistence diets, poor housing, etc., on families which have experienced long spells of unemployment is one important example of influences which may "weight" the statistics. Another related matter which has come to the fore with the decline of relief-loads in recent years, is the difficulty of interpreting changes in the amount of medical service accorded under any organized scheme. As Table 60 shows, 14.4 per cent of the relief population in Ontario required treatment on the average in 1936-7 as compared with only 12.8 per cent. in 1935-6, while total expenditures declined much less than the total numbers on relief.¹ At least three facts, singly or in combination, may account for this. There may have been a real increase in sickness, i.e., the *general* incidence may have been higher in 1936-7. Secondly, the services of doctors may have been sought more frequently as the provisions of the scheme became better known, whether sickness was any more serious than the preceding year or not. (Some of this may be malingering, but certainly not all.)² Finally, in the reduction of the relief rolls the workers and families with better health and physique may have played the larger part: that is, there is a presumption that the healthier workers will secure jobs more easily, and to the extent that this happens the health level among those remaining unemployed will be lowered.

ADEQUACY OF PRESENT COVERAGE

Whatever may be brought to light by more detailed studies, it is evident, from the principal cities alone, that organized medical service where it exists is encountering a need of wide dimensions. The arrangements which have been made by municipalities have not been mere acts of benevolence but have been forced to their attention by these needs. Private agencies of many types, and privately-endowed hospitals are still furnishing various supplementary health services; most of these have in fact been augmented during the period of the depression. But a larger volume of medical care is now being

¹Cf p. 181

²More doctors as well as more unemployed patients were brought into the scheme; also certain additional categories of dependents were made eligible

provided in Canada under publicly-financed arrangements than ever before.

Contrasted with the situation as it was in 1932 and 1933, the progress made in this area of community welfare is appreciable. But the halting character of these improvements is hardly less marked. No federal responsibility has as yet been assumed or broached through the mechanism of the Relief Acts.¹ The way which seemed to be opened in the Employment and Social Insurance Act of 1935 has been closed *sine die*.² Of the provincial governments, Ontario and British Columbia alone make specific appropriations in aid of medical relief, though in Alberta and Saskatchewan the provinces and the federal government are in practice bearing a large part of the cost, which legally is a municipal charge. While all the largest cities now allow for some medical costs in their unemployment budgets, there are many urban centres and still more rural districts without any systematic arrangements for providing doctors' services.

Organized provision for the health needs of the unemployed as such has developed farthest in Ontario. This province differs from the others in Eastern Canada in its official recognition of medical care as one of the "allowed" elements in material relief. The Ontario regulations which define these under the current Relief Act include, besides food, fuel, clothing and shelter, "medical services and medical supplies . . . or the equivalent of any or all of them for needy persons and families". In the West, the relief populations have benefited from a number of community medical services which were pioneered in the Prairie Provinces, although many of these have suffered from financial difficulties in the depression. Considerable advances both in standardizing unemployment relief and in improving general health services, have been made in British Columbia. While the latter improve the chances that the health needs of low-income groups will be better met, however, to many of the unemployed they are not necessarily of direct benefit. The initial health insurance plan, which recognized this, has not been adopted. Least attention has been given to the problem in the Maritime

¹Federal regulations limit relief to food, fuel and shelter. It may be added that in principle this is justifiable. Medical care should be provided for as a specific community service, not as a relief or dependency auxiliary. No such programme for new services, or the integration of existing ones, yet exists, however

²Cf. p. 221.

Provinces, where aid to the unemployed is still largely at the "least eligibility" level of poor relief

Unevenness of treatment and policy appears in other ways. In rural as compared with urban areas, lower standards or lack of facilities is characteristic in many parts of the Dominion. The services of county and municipal health units have helped to counter these disabilities, especially in the Prairie Provinces and Quebec, but the bulk of this work is preventive and educational and does not meet the "family doctor" needs of the unemployed.¹ Because of the administrative separation which has been practised for many years, another dividing line which often represents a distinct inequality of treatment is that between families and single men.² Responsibility for transients has been assumed by Ontario and the Western Provinces, but this is not uniformly understood as including medical care. Some medical attention was available in most of the federal works camps which were operated after 1932,³ but such facilities as there were disappeared automatically with the abandonment of the camps in 1936. Some single men are carried on nearly all urban relief rolls, but for the most part, the medical relief schemes adopted by the larger cities cater for married men or widows and their families. The contacts of unattached men with hospitals and the general practitioner are particularly likely to be only casual ones. Another important point is that either individuals or families have better chances of securing medical care if they are on relief in the city rather than the country, simply because (unless measures have been taken to ensure otherwise) doctors, hospitals, nursing services, etc., are concentrated in the chief urban centres. Administratively this situation can only be met if the scheme of medical provision covers the whole province, and if policy and regulations are standardized so as to give equal privileges to all types of unemployed persons. The logic in this matter of course does not stop short at the provincial boundary. The varied schemes at present in operation to provide doctor's services for the unemployed are

¹For an account of the origin and organization of Health Units, in Quebec, Ontario, Saskatchewan and British Columbia, cf. *Canadian Public Health Journal*, March 1929.

²Cf. M. Tucker: "The Problem of the Homeless Person," *Child and Family Welfare*, Canadian Welfare Council, Ottawa, Jan. 1937.

³Medical care was systematically provided for in the projects operated by the Department of National Defence, but was sporadic and of indifferent quality in others.

only a special example of the need for a national overhauling of eligibility regulations and the standards of aid.

MEDICAL RELIEF *v.* HEALTH INSURANCE

Apart from general public health measures,¹ three stages of organization for providing medical care to sections of the population who cannot afford it by themselves are all represented in Canada at present: (a) provision on the test of indigence, through overseers of the poor, free beds in hospitals, etc., (b) subsidies to the medical profession for the reimbursement of services which would otherwise be unpaid, and (c) contributory health insurance, or related schemes of a group or co-operative character. Health insurance to date is represented only by statutes in two provinces, neither of which have been brought into operation the most extensive coverage, that in Ontario, is achieved by means of the second expedient. An assessment of medical relief is very necessary at this stage in the evolution of our welfare services. One reason is that imitations or improvements of the subsidy-scheme are certain to be witnessed in the immediate future; but a second and important one is that the nature and principles of medical relief should be clearly distinguished from those of health insurance, to which it bears some superficial resemblances.

The Ontario scheme has some very definite merits. In the first place it has raised, in considerable part at least, the burden of gratuitous services which the depression loaded upon the medical profession. This burden was inequitable, not only in being left to one particular occupational group instead of being made a publicly-shared cost, but because it was much more heavily carried by some members of the profession than others. The distribution of work under any scheme of course is almost certain to be uneven, but this is not a serious difficulty provided that such work is remunerated. Secondly, it has ensured the steady provision of badly needed services, which before were uncertain and secured mainly in emergency only. In Ontario these services are now available over a sufficiently wide area for reasonable uniformity of treatment to have been developed among those eligible to secure it. This advantage is of course much more limited in provinces where only a few cities have adopted the scheme.

¹Cf pp. 175 and 209 *et seq.*

Many of these latter, also, operate the scheme on an arbitrary lump-sum grant instead of the somewhat more flexible per capita base. Thirdly, the scheme introduces measurement into the problem. It brings what was before an unknown and vaguely alarming amount of sickness and medical needs gradually into the form of defined and predictable contingencies; though this, again, depends on the efficiency with which statistics of the scheme are collected and compiled. Fourthly, by bringing the relief population as a whole into more constant touch with doctors it establishes at least the beginning of a clearing system. Special needs may be made known, types of care which are not suited to the general practitioner may be referred to hospitals or other appropriate agencies, and so on. While this process has not developed very far, it is bound to occur in some degree just as, for example, the contacts of social agencies with families lead to the sifting out of tuberculosis cases, the provision of extra child welfare services, etc. Both for the fullest application of the educational and preventive measures of public health, and the most economical and effective direction of the population to the various medical agencies of the community, the first essential is a wider network of contact with the general physician. The full implications of this do not appear as yet to be generally recognized, but every medical relief plan has brought the realization nearer.

On the other hand, the medical relief arrangements have several weaknesses. The first relates to the group covered. Individuals or families must be on relief to receive the medical permits: once employment is secured, they must pay for their own medical bills, rely again on the hospitals or gratuitous doctors' services, or resort to patent medicines. Since the great bulk of those who come off the relief rolls do not get high-wage jobs and may have debts to clear, employment actually means a heavy loss in this respect, especially for a man with a large family. As already pointed out,¹ the existence of a subsidized scheme which extends benefits to those on relief only is also an anomaly because there are large numbers of normally self-supporting families who have similar needs for medical care, which they cannot wholly finance themselves. Secondly, the range and quality of the medical services provided have various limitations. This is less true

¹p. 177.

of Ontario than of some of the smaller-scale schemes. Examples of the limitations, e.g., on operations, hospital charges, the cost of glasses, dental work other than extractions, restricted prescription-lists, have been given: in the more elementary schemes, a minimum of one visit per patient per month is another example. Partly this is a question of finance, but it is also inherent in the status of the scheme. On the one hand the principle of relief grants is that of subsistence or necessity only, while on the other too generous a service would increase the disability at which the employed wage-earner is placed to unfair proportions. Thirdly, while the subsidy-system is an obvious improvement over the situation in which doctors could expect no reimbursement at all, it is still only a halfway measure. Although a standard schedule of fees is approved (\$2 for an office visit, etc.), in the majority of cases only a percentage of these are received by the doctor at the end of the month, whether the funds of the Medical Committees come from per capita or lump-sum grants. Beyond a certain point, also, a general increase in patients may even mean a reduced *pro rata* allowance for an increased volume of work. Many complaints from doctors on the unsatisfactory financing of this type of scheme are still unmet. And in these circumstances the relief patient will not be particularly welcome. There is every temptation for the indifferent doctor to put in his bills early in the month and to discourage relief patients thereafter, while the physician who feels his responsibility continues to give his services to unremunerative relief patients and is penalized. Finally, the permanence of medical relief schemes is doubtful, and this fact adversely affects their standards and general status. The "emergency" psychology which has conditioned the provision of direct relief, since 1930 and before, extends to many of the arrangements which have been made to take care of medical needs among the unemployed. It is true that the care and co-operation with which the scheme has been developed in Ontario is not in accord with this statement.¹ But influences of the kind indicated above still apply to certain parts of even the Ontario system, and more generally elsewhere where arrangements appear more transitory.²

¹ Cf. also pp 205 *et seq.*

² There is another aspect of the Ontario plan which must be frankly faced. Medical relief funds are derived from provincial and municipal taxation; but their detailed supervision rests with the local committees whose personnel is almost entirely composed of doctors, i.e., members of a profession which, while a highly

A medical care subsidy arrangement for the unemployed is neither state medicine nor health insurance. It is a limited expedient, and most of these limitations can only be removed through a properly-budgeted health insurance plan. The prime advantage of health insurance is that it can be devised to cover all groups, whether unemployed or not, who cannot afford medical care except through the economies of the contributory pooling method.¹ State subsidy would be necessary to include the unemployed, and some special regulations might apply to their benefits within the scheme. But an inclusive network for all persons below a certain income-level is the only means of avoiding inequities. It accords also with the facts (a) that there is a wide and fluctuating margin, not a hard and fast line, between low-income groups and the unemployed, and (b) that sickness, not indigence, is the logical test which should determine the organization of publicly-supported provision. The advantages of laying the foundation for a clearance and distribution system, and of enabling systematic measurement of a major area of medical needs, are of course to be derived far more extensively from a health insurance plan than from a scheme for the relief population alone.

THE ESSEX COUNTY RESEARCH PROGRAMME

This review would not be complete without reference to the developments made from the basis of the Ontario medical relief scheme which have been under way in Essex County for the last two years. When the medical relief scheme was made compulsory throughout the province in Ontario in 1935, the Medical Society in Essex County decided to make their participation an opportunity for an experiment in the best method of mass administration of medical care, and for gaining important information, on sickness, costs, the amount of physicians' services required, and related data. With the co-operation of the University of Michigan and the personnel already administering a medical relief unit in one of the

reputable one, is none the less a private body. Even the public health services are not represented, either locally or provincially. This is a defection from democratic principle which should not be lightly disregarded or glossed over. Especially if health insurance or the co-ordination of health services in general are on the horizon, it is imperative for efficiency that the state's responsibility for setting standards of quantity and quality should be clearly defined and exercised.

¹ Some special state services would be necessary, in addition, as in all other fields of welfare aids, to assume minimum care for non-contributory dependents.

counties in this State, a standard record system was adopted. The principal report card includes concisely all the medical and financial data needed. The necessary extent of this data was arrived at after careful consideration of the objectives of the system and the work placed on the individual physician; and this and other records are planned for machine tabulation. Funds for research work in the analysis of this material were first granted by the Ontario Medical Association, from the central administrative expenses of the medical relief fund, and in 1937 on a more substantial scale by the Rockefeller Foundation. Special use of the National Employment Commission's relief census data has strengthened the basis from which the measurements in this project can be built.

The results already obtained are highly significant and deserve the closest attention of medical men and students of social welfare administration. One of the immediate products is a great increase in the efficiency of the clerical or accounting work involved in assigning payments to doctors. This is partly due to machine tabulation; but the feasibility of substituting "control formulas" for the laborious personal inspection of accounts has also been demonstrated.¹ The informational products which may be derived from this modernized administration are an extensive subject in themselves. Revealing classifications and cross-classifications are possible on types of sickness, the various social and physical groupings of the patients and of the relief population from which they are drawn, costs and nature of service, trends over time, the effect of changes in policy. Special questions which arise out of administrative experience from time to time, or from these basic measurements themselves, can be answered by selecting appropriate records for tabulation. This information has a double value; in its purely medical aspect (the incidence of diseases and other needs for medical care, the nature of treatment, etc.) on the one hand, and as an administrative guide or instrument of policy on the other. Allowances for the contingencies characteristic of certain age groups, adjustment to provide for the ailments of highest incidence, the

¹The technique of a control formula is to standardize the elements which determine the size of a doctor's account and after testing them for a sufficiently large number of cases, to express them in a "normal" or probability equation. This can be computed separately each month if necessary, but once formulated it is quickly applied to a large series of accounts. (See *Medical Relief Administration*, already quoted, for a detailed explanation.)

setting of maximum or minimum accounts, are examples of the latter.

A matter of such special importance that it should be mentioned separately is the determination of the most effective regional unit of administration. Some progress has already been made in this direction in the Ontario scheme as a whole,¹ and public health programmes of all kinds encounter this as a basic problem. The co-ordination of unrelated or overlapping services, the relation of hospital and other institutional facilities to the general practitioner, the right proportion of doctors, nurses and medical agencies to a population of given size: these are the types of questions on which guidance may be secured, if attention is devoted to them through the medium of a carefully-documented administrative experiment. Public health reorganization, as in British Columbia, or comprehensive health insurance, as in Great Britain, may of course make possible the same developments, and on a wider scale. The Essex County machinery is still limited to the relief population. And it has not yet been applied to these wider problems of planning the medical facilities of the community as a whole (the issue, e.g., of hospital *v.* outdoor clinic service is a particularly serious one). But within its limits it constitutes the most adequate and encouraging system under which medical provision is made for the unemployed at present in the Dominion.

¹ Cf Annual Report of the Medical Relief Board (Ontario Medical Association, Toronto, 1937), pp 21-24, and *Medical Relief Administration (op cit)*, pp 9-10, for a summary of the advantages gained in reducing the number of administrative units in Ontario, achieved by pooling the district committees at first set up

CHAPTER 24

GENERAL COMMENTARY: PRESENT NEEDS

THE HEALTH of a nation's people, inherited and constitutional factors apart, depends on two main kinds of medical attention, (a) the protective, educational and special treatment measures which are usually recognized as Public Health facilities, and (b) medical care sought by individuals on their own account. Individual care may extend all the way to specialists, hospitals and other institutions and all the intricate refinements of modern diagnosis and treatment; but it pivots essentially on the general practitioner or family doctor in the first instance. Public health measures proceed from the basic matters of sanitation, food inspection, industrial hygiene, to the provision on a community basis for tuberculosis, venereal disease, insanity, child welfare, special sera, and so forth. No hard and fast line can be drawn between "public health" and "individual treatment" services, but the division is a recognizable and practical one. The studies brought together in this volume raise questions in both fields, but more particularly the second. And it is of considerable importance that the first (public health) is now generally accepted as clearly a community matter requiring public organization; whereas both our arrangements for securing doctors' services and our thinking on the subject are in a transitional stage.

PUBLIC HEALTH MEASURES

The first country to accept state responsibility for public health services was Great Britain. Acknowledgment of this responsibility was expressed in the Public Health Act of 1875, which has served since as a model for much of the early public health legislation of other English-speaking countries. Modern public health development began in England as a part of the reform movement which sought to remove the gross evils of the early industrial revolution, in insanitary and overcrowded housing, unhealthy working conditions, food adulterations, etc. Progress was hastened by the series of cholera epidemics which occurred in England after 1832. Neither fear nor humanism was, however, the sole incentive. More and more people became persuaded as time went on,

that good health pays. To-day industrial hygiene, even solely as a matter of business, is a necessary interest of the good employer. Along with public health development went of course the advances of medical science which basically made it possible, notably the epoch-making progress growing out of Pasteur's discovery, in 1878, of the germ theory of disease.

Through organized community effort, public health services have now been developed in practically all of the larger centres of population in civilized countries. Its extension to rural areas is a newer problem which has called forth much thought and ingenuity, but many country districts still remain practically unserved and, consequently, unprotected. In Canada, as has been indicated, the crux of present inadequacies is the great divergence in standards and comprehensiveness: not merely between town and country but also between provinces and urban centres.

An adequate public health service assures to all those living in the area served, safe water, milk and other foods. This assurance is important because, if contaminated, food or drink may act as the vehicles for the transference of communicable disease. Industrial and housing conditions must also be systematically inspected if the environment of disease is to be brought under control. During the depression, the quality of water, milk and food supplies has in general been maintained. There has been no reason to fear an outbreak of typhoid fever or any other of the communicable diseases which are commonly spread by water, milk or foodstuffs. Under the impulse of growing education in this direction, the hygiene of working conditions has been improved in some industries, though in others, especially those which are operated on a small scale, the pressure of hard times has caused the influences of employment on health to be neglected. Housing conditions, both rural and urban, as many reports have testified, have worsened throughout the depression, though for economic reasons rather than any defaults on the part of public health inspectors.

In form, public health protective services are community-wide. They are intended to safeguard all citizens regardless of their economic standing. But even the benefits of safe milk and foods are limited, however, in a positive sense, to those who are able to purchase the variety of foods and the quantity of milk necessary for good health. Even more is this true of

housing; and a correlation between low wages or low skill, and poor working conditions is also well established. While the blanket of public health measures may be equally spread, therefore, it cannot ensure equal coverage while these other limitations on health are unmet. Conditions of nutrition, which have come to the fore in the majority of the present studies, are an outstanding indication of this.

COMMUNICABLE DISEASE

The earliest efforts of public health were directed towards the control of communicable diseases through the sanitation of the environment. The next steps in the control programme were based upon isolation and quarantine. This is not the place to discuss the value of quarantine procedures, but it is sufficient to say that they have not been effective in the control of those communicable diseases which are usually spread by transference of the secretions of the nose, mouth and throat. Considerable success has followed the efforts to control small-pox and diphtheria because for these two diseases, we have available simple, safe and practical means to render the individual immune or resistant to them. With these exceptions, however, even in the primary matter of environment there is still much to be done in the poorest and worst-equipped sections of the community.

During the period of the depression, there was no let-down in communicable disease control in most places, though the decline of many hospital appropriations has rendered proper treatment more difficult. On the whole, there has been no reason to fear that the communicable disease situation would be seriously affected, though we have probably been fortunate in that no epidemic of any unusual severity appeared during the worst years or in the most depressed areas.

Medical inspection in the schools has served to keep down the incidence of many diseases among children. This diagnostic network is far from perfect, but so far there is nothing at all comparable to cover the adult population. The findings with regard to venereal disease among the unemployed men examined in one of the present studies give most point to this. While the sample in this matter may well be somewhat random, a history of infection among 26 per cent. of the total, and a further 2.6 per cent. of previously undiagnosed cases, are striking figures. Considering the seriousness of syphilis and gonorrhoea to the individual and

to the race, our attempts to deal with these diseases are puny, to say the least. Wider interest in syphilis control is being newly awakened, but it is long overdue.

Tuberculosis, also high in the ranks of the killing and crippling diseases, is more clearly a disease of the poor. It flourishes under those conditions which are commonly associated with poverty, poor nutrition, unhygienic living conditions, insufficient rest, and over-fatigue. The finding of eight cases, on ordinary clinical examination without X-ray, among an unemployed adult group in 1933 was another proof of the existence of a considerable amount of untreated tuberculosis. This may be dismissed as being a small percentage: but every such individual is a constant menace to the community because each case is a focus of disease from which other cases develop. Now that vital statistics for the whole of the depression period are available it is clear that optimism based on the continued decline in the tuberculosis mortality-rate may easily be exaggerated. Recently the rate of decline has been halted, and in some cases actual increases have been registered: but the amount of morbidity, and the spread of the infection, undoubtedly increased some years ahead of its effects on the death rate. To make good the ground which has been lost, intensive case-finding and more extensive treatment facilities is an inescapable need. Tuberculosis campaigns have been taken up so vigorously throughout the Dominion that this branch of medical care compares favourably with most; but even so the time is ripe for a comparative survey of the resources of hospitals, clinics, sanatoria, and the success of organized preventive work in all the provinces. There is a constant tendency, which must be corrected, for the problem to be viewed in too local a perspective. It is even more important, however, that tuberculosis should be related to its causal economic and social conditions; and also that its control should not be regarded as a matter isolated from public health and practitioner services in general.

PHYSICAL HANDICAPS

It was not until the World War, when man power became a subject of national concern, that the public and governments first seemed to realize the extent of physical disabilities existing among the population at large. The United States recruitment examinations, covering over two and one-half

million men from eighteen to thirty years of age, showed 53 per cent. as physically fit, 26 per cent. with defects correctible through treatment, and 21 per cent. unfit for service and rejected. The records of examinations made under the Military Service Act in Canada from 1917 to 1918 are closely similar. Out of 362,000 men of from twenty to thirty-four years of age, 181,300 or more than half were declared physically unfit.¹ These are high percentages, though they are not surprising to persons familiar with the results, e.g., of medical examinations of school children or of applicants for life insurance.

There is of course a considerable difference in the significance of various defects. Defective vision may be a minor or a major handicap to the individual, but a focus of infection may be a serious menace to health, indeed to life itself. The occupation of the individual concerned determines the significance of such a handicap as a hernia. But the existence of *correctible* defects is the fact upon which a constructive approach must fasten. Dental and optical defects are the most obvious. Most medical relief schemes have provided for these in some measure, but organized statistics on the subject would be welcome. In the Montreal samples, examined before medical care was made generally available for the unemployed, about one-third of the adults had defective vision and 57 per cent. of these men without the glasses they required: among the youths 69 per cent. of those needing visual correction had no glasses. Good teeth were more common among the youths than the adults, as might be expected from their having been examined at a much shorter remove from school inspections, but even so, more than half were rated only fair or bad. As previous pages have illustrated, there are limitations of various kinds on such optical and dental care as may be secured by persons of low income. Yet this is a field in which better organized provision could produce improvements in employability and general health out of all proportion to the expenditures involved.

The proportion of persons in need of surgical operations is smaller, but the possibilities of individual rehabilitation which could be realized through systematic and selective treatment are even more striking. This has been very

¹Since many men who had volunteered prior to 1917 and who would presumably be physically fit are not included, the sample presented by these statistics is unrepresentative to this extent

effectively demonstrated in recent years in West Virginia.¹ An experiment in furnishing full surgical attention (including a reasonable period of recuperation) for unemployed men with correctible ailments, was started here in 1935 by a member of the Medical Association and a member of the Workmen's Compensation Board of the state. It is now incorporated in a special Physical Rehabilitation Department with a budget of \$50,000 a month: the average cost per patient has been around \$130, and it has been found that at least forty to fifty per cent. of the men treated secure employment. Whether from the individual or the community point of view, this is a decidedly more efficient way of spending relief money. That a policy of this type, permitting special medical expenditures for the curable, would be advantageous in Canada is clear to anyone familiar with the personnel of our present relief rolls. In the Montreal sample of unemployed men, half of those with physical handicaps could have been restored to fitness by proper treatment. Most medical relief schemes, it is true, are now financing a steady percentage of operations; but the greater number of these are likely to be of emergency rather than of forward-looking rehabilitative character, unless a policy with these latter objectives consciously before it is put into operation.

NUTRITION

Study of health conditions among the unemployed leads inevitably to the discovery of differences which appear to be basically those of income-levels and standards of living. Nutrition, while not the only index, nor one which is a measurement of health entirely without qualification, reflects this most clearly. It shows that medical attention alone is not enough. The state of the nation's health depends not only on public hygiene measures, on current progress in combating contagious diseases, and care during actual sickness, but on how large a percentage of the population are securing the quantity and variety of food necessary to maintain health. This is not a problem of depression alone, although beyond any question the depression has greatly extended the proportion to whom poor nutrition is a constant threat to health. Among the unemployed groups examined in 1933 only 55 per cent. of the adults and 47 per cent. of the youths

¹Cf. Ratchiff. "Repair vs Relief in West Virginia" *Survey Graphic*, November 1937.

could be rated as showing a good nutritive state. A wide prevalence of poor nutrition was found in a sample of families who had been at the relief level for a long period. Whatever qualifications may be needed in comparing the latter group with the relief population as a whole, an outstanding result which can confidently be generalized is that subsistence living produces the heaviest incidence of malnutrition among growing children.

There is evidence, in the comparative weights and heights of children of school age, that nutrition varies with economic status throughout the whole strata of the community, whether unemployment is one of the causal factors involved in this or not. Information on the nutritive state of the population as a whole is lacking, and a series of studies of various social groups is badly needed. Especially for the lower income groups who are normally self-supporting, these would be particularly revealing and valuable for comparative purposes. But the incorporation of more or less fixed food allowances in direct relief grants, as these came to be organized on a national scale after 1930, enables some highly important indirect evaluations to be made for the dependent population. All the test-standards available, especially when allowances are made for the practical necessities and "human" difficulties of a family budget, point to serious inadequacies at the relief level of living. If relief allowances are completely unsupplemented, or spent with any divergences from the strictest economy, they cannot maintain employability or the conditions conducive to health. Supplements in various forms—casual earnings, credits or unpaid debts, artificially low rents, free meals for school children, clothing donations, etc.—are in fact very common and this is one of the reasons why a large section of the population have continued to live on relief without more serious consequences than might have been expected. That supplementation is necessary has been most directly recognized in the provision of free medical care: this is true everywhere of hospitalization in some degree, but has now been extended to a complete range of facilities in some regions. The availability of medical attention when the emergency arises, however, is only part of the problem. Undernutrition and other conditions predisposing to sickness are themselves products of the subsistence level. Preventive treatment here must start at a stage further back—with

improved diets, better housing, pre-natal services, "well-baby" clinics, rather than the "ambulance work" of medicine alone.

Some of the evidence of this highly important question is at first sight confusing. Conditions of health and nutrition appear to be unchanged or even better among families on the relief rolls. It must first be remembered that there was practically no public (official) care for low-income groups other than the completely indigent until unemployment aid was organized. Since it has existed it has meant that, irrespective of the adequacy of food and other allowances, they have at least been more regular and certain for many of the poorest families than they had experienced before. Among the chronically and marginally dependent it is quite likely that there has been less actual want, (and in recent years more medical care) during the depression than before it. A second consideration is of even greater import. Neither social agency cases nor those found on the relief rolls in the earlier years of the depression are representative of the "new unemployed". Many of these individuals and families kept off relief and lived on their own declining resources for considerable periods: even to-day there are many who though unemployed are not on relief. The hardships of a reduced standard of living, and the incidence of ill-health, may well be greater among these groups than among the "old" unemployed. A survey to determine this will need not only to distinguish persons who have been on relief for short and for long periods, but also to cover unemployed persons not on relief.

COMMUNITY PROVISION FOR MEDICAL CARE

The final and largest question raised by the studies contained in this volume, and by all similar ones, is: how can medical care¹ best be provided more systematically and equitably for the large section of the population who cannot pay for it on an individual basis and are not getting it sufficiently now? Thus posed, this is a considerably wider

¹It should be clearly understood in this context that medical care means not only doctors' consultations and treatments, but nursing services and clinical facilities, and also dental, optical, surgical attention, etc. There is a tendency to pose the problem in terms only of the general physician and the hospital. But the most efficient use of our present health resources cannot be obtained unless they are all considered together and eventually dovetailed in a national health plan. The fact that medical needs are of many different types is an important secondary reason for this reminder.

question than that of the coverage of persons on relief and the adequacy of present medical care for them; but the reasons for this have by now been made clear. First, the relief rolls do not include all the unemployed. The number of wage earners who suffer from some unemployment, whether intermittently or for a short period in the year, is probably twice as great as the total in receipt of unemployment relief at any given time.¹ Over and above these are the sections of the population, urban and rural, whose incomes do not provide an adequate margin for sickness emergencies. There are, of course, differences of degree. Some families can afford small but not major expenditures. But at the lower level of even the self-supporting groups, it is a fact not sufficiently realized that those whose means are just sufficient for necessities are automatically "medically indigent", i.e., dependent on such facilities as are available free.

If medical care is a contingency left to each individual to secure as best he can, it becomes a function of the distribution of wealth. Such studies as have been made show that though in general the poor experience more sickness than the well-to-do, more medical services are supplied to the higher-income than to the lower-income groups.² This is tempered in part by differences in the scale of fees charged at different status-levels; but, as various reports of the Committee on the Costs of Medical Care in the United States have shown, this gradation is not enough to prevent doctors' and hospital bills from being a very heavy burden on middle-income families. At the lowest end of the scale, "medical indigence" is accepted, and catered for through public clinics, free wards in hospitals, the V.O.N., special-rate maternity services,³ and so forth. With the organization of medical care for the unemployed, (or rather for the unemployed on relief) a new stage has been reached, though so far only in a temporary and partial way. In almost every province simple subsidies

¹The careful distinction between being unemployed and being on relief which was followed in the census of the Prairie Provinces for 1936 enables specific measurements to be made of this ratio for the first time. While the figures naturally vary between areas, and are not necessarily representative of Eastern Canada, they support the broad generalization made above.

²Cf. Chapter 1.

³Maternity care has been excluded from the scope of this volume, but it is an important element in medical relief and must be in any other scheme of group provision. Doubts as to its present adequacy invite serious study: cf. e.g., *This Changing Scene* (pp. 11-14) and *Need Our Mothers Die?*; Canadian Welfare Council publications, Ottawa, 1936.

are now being paid to the medical profession and other agencies concerned.

The anomalies in this situation have been pointed out. Organization which will permit the securance of regular and reasonable medical attention without hardship, is needed not merely by persons who prove this by their indigence in respect of the bare necessities of life, but by a very much larger group who are normally self-supporting. The criteria for such provision are not poverty and unemployment, but *sickness* and *income*. The latter is a factor if the size of the eligible population is not fixed by some simpler fact such as regional boundaries.¹ If it is used as a determinant of coverage it must depend among other things on the range of medical facilities included, and their cost. The more expensive are medical services—from ordinary practitioner's dental, nursing fees, etc. upwards to the higher grades of specialist and institutional treatment—the higher the income-group which needs the aid of an organized system.

There are two means by which this aid can be provided, through the pooled or group method, or by state taxation. The essentials of the "pooling" principle are that (1) it enables individuals to make small periodic payments which can be easily budgeted, instead of having to face a heavy bill at some emergency period; and that (2) by pooling the risks of illness of a large number of contributors it distributes them evenly (within certain limits) in point of time, so that the funds of other contributors are, in effect, available for the individual who happens to be in need of medical care at a particular moment. Another consequence, which may well be regarded as a prime advantage rather than an incidental, is that a steady flow of income instead of a sporadic one is assured to the doctors and other agencies participating in the scheme. The second method, the organization of medical care as a state service, is also in part a pooling arrangement. The differences are in the public status of the doctors, hospitals, etc., retained, and in the fact that the funds (i.e., taxes) by which the plan is financed may not be drawn solely from persons benefiting directly from it. Tax-supported medical care is far from new, and is already well established in both complete and partial forms in Canada: public health departments, hospital subsidies, assistance in tuberculosis and

¹ As in the case of the "municipal doctor" system.

communicable disease treatment, the care of patients in mental institutions, the medical care of war pensioners, and the specially relevant example of "community" doctors and nurses in Western rural areas.

Combinations of the contributory health insurance principles and those of state medicine¹ are of course possible, and have been applied in most of the national health insurance plans in operation to-day, both to their administration and finance. All national health insurance plans, moreover, recognize the fact that community aid, once applied at all, must as a matter of logic and equity, be applied to a majority section of the working population. The "medically indigent" are not merely the impoverished and the unemployed. For meeting normal long-run health and sickness needs, they include most families, *if they have to buy this care without the aid of any community organization*, whose incomes are less than \$1,800 a year. Some budgets would set the figure considerably higher.

Health insurance offers an answer not to this problem alone but to others of equal importance. I. S. Falk summarizes as the principal findings of the Committee on the Costs of Medical Care, and the outstanding problems of the medical care of the population in the United States, the following:

- a. The uncertain, uneven, and unbudgetable size of medical costs for the individual or the family.
- b. The difficulty of knowing how, when, and where to secure good medical service.
- c. The uncertain and inadequate remuneration of practitioners and institutions.²

The functioning of health insurance administration as a clearance-system, its effect in bringing into closer touch with the general practitioner a large section of the people whose present contacts are casual or emergent only, and its stabilizing influence on the funds available for medical services in contrast to the burden of unpaid services imposed upon doctors in most regions during the depression, are all of them current needs in Canada. A fourth issue, which preceding chapters

¹In view of the importance of a clear distinction of the difference between "public health", "state medicine", "health insurance", and "medical relief", an excellent recent definition (from Charlotte Whitton: *Social Work and the People's Health*) is quoted in the Appendix, p. 235.

²Falk: "The Present and Future Organization of Medicine". *Milbank Memorial Fund Quarterly*, April 1934.

have indicated, is that under the pressure of unemployment a considerable amount of emergency or "half-way" organization has been brought into being. Much of this is still inadequate, but as improvements are made it becomes clear that comprehensive health insurance is in the line of evolution.

This does not mean, of course, health insurance is all that is needed for the solution of Canadian health and sickness problems. If the scope of its medical benefits is very limited, a series of problems of the organization and availability of hospitals, clinics, and other related institutions, maternity care, surgical facilities, etc. still remain. In any case a specially organized state medical service will almost certainly be needed to provide for that part of the dependent population which cannot be expected to become eligible under health insurance. Nor does it mean that there will not be conflicts between the views of the medical profession and those of the general public, of social welfare workers or governments. Medical relief schemes at present have left a very "free hand to the doctor", and this emphasis is also placed on some private group plans which have recently been gaining advocacy. But these are by no means necessarily the best models for a Dominion plan. In achieving this a compromise has to be arrived at between the legitimate interests of the doctor as a citizen engaged in a special form of business, and the responsibilities which rest on the state to ensure their participation in the most effective network of health coverage.

RECENT STEPS TOWARDS HEALTH INSURANCE

A complete step in this direction has not yet been decisively taken in Canada as a whole, though we are now near to it in more than one way. Two provincial Acts are on the statute books, in Alberta since 1935, and in British Columbia since 1936, though neither has been made law. Consideration of the present plan in British Columbia goes back to 1932, if not indeed to 1921, when a provincial Royal Commission on the subject first recommended the adoption of health insurance. The Alberta Act also was far from being without precedent, for in effect it provided for an expansion or completion of the system of municipal doctors and nurses such as already operates in Saskatchewan. The Alberta plan was to include hospitals, dentists, medicines, etc., for all legal residents of the province financed on a tax basis. The British Columbia system

is a three-party contributory plan which in the process of revision has been cut down from its initially large coverage.

Medical opinion is distinctly more favourable in Canada than in the United States.¹ With certain differences in administrative detail, plans have been recommended by the provincial medical societies in both Manitoba and Saskatchewan. In 1934 a special committee of the Ontario Medical Association was appointed to study health insurance, and has made several reports. These have endorsed the general principles of state-aided insurance, with a preference for a federal scheme, but have also emphasized the value of voluntary experiments, both "to accumulate administrative and statistical data, and to demonstrate the capacity and right of the (medical) profession to participate in any state scheme".² When the medical relief plan was put on a provincial basis in Ontario in 1935, this opportunity to secure some needed measurements was particularly followed up in Essex county. More recently, three voluntary health insurance units have been set up, in the form of non-profit-making corporations, in the counties of York (including Toronto), Oxford, and Norfolk. (See Appendix, Note C.)

Several new group-hospitalization plans, which offer a specified schedule of hospital care to members paying a fixed periodic sum, have been organized in recent years; while some, sponsored by business firms, employee-groups, hospital associations, etc. have a much longer history. Their total coverage, however, is still relatively small, except in certain parts of Saskatchewan and other western provinces where they are financed co-operatively on the basis of unions of municipal districts, and are available for all the residents therein.³

¹The American Medical Association officially expressed opposition to state health insurance in 1935. But an important minority group of the American Medical Association has recently gone on record (Nov. 1937) in favour of government-subsidized plans for medical care of the indigent. There is discernable now a tendency to crystallize the issue as (a) acceptance of organized care for the "medically indigent" but (b) opposition to "socialized medicine". (Cf. e.g., leading article "Medicine and Government" in *New York Herald-Tribune*, Nov. 8th, 1937). But, as the text of this chapter suggests, this terminology can be very vague and misleading.

²*Medical Relief Administration*, issued by Essex County Medical-Economic Research, Windsor, Ontario, 1937, p. 11

³Group hospitalization may be an auxiliary to a general health insurance plan, or if the service coverage of the latter were very wide, an integral part of it. But the clinical facilities offered would have to be exceptionally wide to provide a complete alternative to health insurance. For information on the subject from

On a Dominion basis, one of the most comprehensive reports on health insurance was prepared by the Economics Committee of the Canadian Medical Association in 1934. This report, which includes recommendations on some of the less well known aspects of the subject (e.g., means by which the farming population can be covered, the possibilities of voluntary participation in the scheme by higher-income groups, etc.) was endorsed by the Association at its annual meeting in 1935.¹ Some important but less publicized parts of the federal Employment and Social Insurance Act of that year related to health insurance. The declaration of this Act as *ultra vires* was a blow not only to the prospects which appeared at that time of an unemployment scheme and a reorganization of the country's employment exchanges, but to an early Dominion lead in promoting health insurance. The Social Insurance Commission which was to be set up, was charged with a survey of all health insurance plans of whatever kind, in effect in Canada or elsewhere; it was to make recommendations to the government on this basis; and it was given a mandate in detailed terms which would have enabled it to act in an advisory and co-ordinating capacity for medical care schemes in all the provinces. It is difficult, incidentally, to see how this particular administrative device could be in conflict with the British North America Act: though it may be argued, on the other hand, that the procedure contemplated is not sufficiently direct. Except as a preliminary surveying of the ground, it is doubtful whether it would secure the enforcement of reasonable minima of provision throughout the Dominion, which is the present need. It is reasonable to expect, however, that the Royal Commission on Dominion-Provincial Relations (1937), and its related negotiations, will place the whole matter on a firmer basis. All the provinces were recently invited to agree to an amendment of the B.N.A. Act which would make possible at least the beginnings of a federal system of social insurance. So far only unemployment,

various angles, cf (a) Montreal Junior Board of Trade Report of the Committee on Group Hospitalization (August 1937), (b) *The Canadian Doctor*, article, "Encouraging Group Hospitalization" (December 1936), and (c) *Journal of the American Medical Association*, "Group Hospitalization", May 1st-June 19th, 1937 (or combined as reprint)

¹The report set forth the seventeen principles which the C.M.A. considered essential in any health insurance legislation. At the annual meeting in Ottawa, June 1937, these original principles were modified to state that the schedule of fees for health insurance should be the schedule accepted by the organized medical profession in the area concerned.

and not health, has been referred to; but the unification of organized medical care must inevitably be considered. A majority of the provinces are already committed to considerable activity in this field, and there should be few grounds for non-co-operation from any section of the country on this vital welfare matter, whatever may be the issues of "provincial rights" in other spheres.¹

Three outstanding questions are involved in the immediate fashioning of a health insurance system. The first of these is the decision as to whether provinces or the federal government must initiate plans. A few years ago only the former seemed practical, but it is to be hoped that a co-operative programme bringing all the provinces into line, with the federal government setting standards, may now be envisaged. A second decision has to be made on the relation of the relief population to other groups covered by insurance. The simplest method of including unemployed persons in a contributory scheme is to make their contributions a state charge. An alternative is to retain "medical relief" schemes as they exist at present (or rather, if Dominion coverage is to be brought about, to extend the Ontario system to other provinces) and to confine health insurance to those who can pay contributions. The effect of this, however, would be to exclude from coverage altogether all unemployed persons *not on relief*. A non-contributory or tax-supported scheme does not raise these difficulties of coverage, and can be made available for all qualified citizens below a certain income-level, irrespective of their employment status. In any comprehensive scheme, whether contributory or tax-financed, however, it would be comparatively simple to incorporate such special regulations relating to unemployed beneficiaries as are administratively necessary.

The final problem appears to be the mode of participation of the medical profession. The right of the profession not merely to be consulted, but to take a major part in all medical administration, has been conceded wherever health insurance

¹ In their brief submitted to the Royal Commission on Dominion-Provincial Relations, in February 1937, the Canadian Medical Association strongly recommended: (a) state responsibility, preferably federal, for medical care to the unemployed, the indigent, war veterans, old-age pensioners and women and their dependents in receipt of mothers' allowances: (b) a survey of the health services of Canada; and (c) recognition of the principles of health insurance laid down in the Association's resolutions of June, 1935 (referred to above).

has been discussed at the actual planning stage.¹ Yet the failure of protracted negotiations with the medical men of British Columbia was the essential reason for the non-application of the Health Insurance Act in that province in 1935. The principal objections here were to the rates of remuneration proposed and to the method of disposal of the total funds available; and also in part because of doubts as to whether services to relief patients would be adequately reimbursed. It is to be hoped that a compromise will be accepted on this matter of doctors' fees, for otherwise the result will be that costs will limit severely the scope of the scheme. One of the means of limitation most likely to suggest itself, namely, the exclusion of the unemployed, will not provide a satisfactory or permanent solution.

Other difficulties which have been advanced elsewhere are fears that the doctor will "lose his independence", coupled with objections to the extra clerical and registration duties, etc.; and dispute as to the merits of payment "per patient" as against payment "per service". These are important problems of administrative efficiency, but such problems are involved in every extension of welfare services. They are already being faced in part in medical relief organization. They must all be weighed against the present conditions, of much unpaid or poorly-paid work, low standards of health due to inadequate medical care among some groups, and too little regulation and co-ordination of many branches of medical service. The changes necessitated can hardly constitute "regimentation" so long as the profession itself has a large share in the control and management of the scheme.

The experience of health insurance in Great Britain is now well-known: strongly opposed by doctors at the time of its passage over twenty-five years ago, the system in its essentials to-day has the complete support of the medical profession. The British Medical Association has placed on official record its approval of extensions of coverage and types of medical service in many directions, which will ultimately establish it as a complete system of medical care for the nation. In Canada many spheres of medical care require attention before this stage is reached. But several important steps have been taken. Government-assisted medical care for the unemployed has been inaugurated and must be regarded as here to stay.

¹ As also with the medical relief schemes throughout Canada. Cf. *Medical Relief Administration (op. cit., p. 220), p. 10.*

The most immediate need is to improve these services and fill the gaps. Every extension involves responsibilities, but these will have to be undertaken if individual medical care for the mass of the population is to be brought up to the standards of adequacy and efficiency now accepted as necessary in public health facilities in the Dominion.

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TABLE I INDICATIVE MORTALITY RATES, 1926-29 and 1931-34
CANADA, THE PROVINCES, AND CERTAIN OTHER COUNTRIES

Area	General Death Rate		Infant Mortality Rate	
	1926-29	1931-34	1926-29	1931-34
Prince Edward Island	111	113	69.1	65.2
Nova Scotia	124	117	85.6	73.4
New Brunswick	125	113	100.9	81.7
Quebec	137	111	128.8	99.6
Ontario	112	101	74.2	62.1
Manitoba	83	75	71.5	60.5
Saskatchewan	73	65	73.5	62.0
Alberta	86	72	78.7	60.7
British Columbia	93	87	56.3	46.2
Canada	112	97	94.4	75.6
Great Britain	126	124	72.1	66.1
United States	119	109	68.4	59.3
Australia	94	89	53.1	41.8
South Africa*	97	96	69.0	63.8
New Zealand	86	82	37.2	31.8
Sweden	122	116	60.0	51.3

Province	Tuberculosis		Influenza	
	1926-29	1931-34	1926-29	1931-34
Prince Edward Island	98.3	90.4	49.8	30.6
Nova Scotia	118.2	95.6	54.2	40.2
New Brunswick	103.0	78.3	55.8	35.3
Quebec	122.7	100.1	64.5	37.7
Ontario	56.1	43.6	50.1	31.7
Manitoba	60.8	57.5	31.5	22.5
Saskatchewan	46.0	32.2	41.3	26.2
Alberta	58.6	50.2	45.9	28.5
British Columbia	94.1	81.9	30.8	21.4
Canada	82.2	66.6	50.9	31.9

Province	Puerperal Causes		Suicides	
	1926-29	1931-34	1926-29	1931-34
Prince Edward Island	10.3	12.4	4.2	4.5
Nova Scotia	11.1	11.1	4.8	5.0
New Brunswick	16.5	14.1	5.1	5.0
Quebec	15.9	13.8	3.5	4.4
Ontario	11.9	9.9	9.2	11.2
Manitoba	12.5	8.6	9.0	10.5
Saskatchewan	15.2	10.0	8.6	9.3
Alberta	15.8	10.2	12.3	13.8
British Columbia	9.9	7.6	16.2	18.5
Canada	13.6	11.0	7.7	9.2

Sources. Special Report on Mortality in Canada, 1921-35, and *Canada Year Books*, 1928-1937. Crude Rates (uncorrected for differences of age-distribution in the provinces) only, averages for four years in each case.

*White population only.

TABLE II. SOME INDICATIVE MORTALITY STATISTICS FOR CANADA, QUEBEC, AND MONTREAL, 1926-37

Year	General Mortality (per 1,000)				Montreal† A
	Canada		Quebec		
	A	B	A	B	
1926	11.4	10.8	14.3	13.9	13.5
1927	10.9	10.4	13.6	13.2	13.6
1928	11.1	10.5	13.5	13.1	14.5
1929	11.3	10.7	13.4	13.1	13.7
1930	10.7	10.1	12.7	12.4	12.9
1931	10.1	9.5	12.0	11.7	12.1
1932	9.9	9.3	11.4	11.1	11.7
1933	9.6	8.9	10.7	10.4	10.6
1934	9.4	8.7	10.6	10.3	10.5
1935	9.7	9.0	10.7	10.4	10.6
1936	9.7	*	10.3	*	10.2
1937	10.7(10.1)	*	11.1	*	11.0

A Crude. B adjusted (for age-distribution of population).

*Not available

†Rates for Montreal do not distinguish between residents and non-residents

Year	Infantile Mortality (per 1,000 under 1 yr.)			Tuberculosis (per 100,000 all ages) †		
	Canada	Quebec	Montreal	Canada	Quebec	Montreal
1926	102	142	120	84	125.2	133.8
1927	94	129	117	81	117.8	120.8
1928	90	124	144	80	117.9	124.4
1929	92	121	132	77.6	118.6	130.6
1930	89	120	125	79.3	118.7	123.4
1931	85	113	113	73.5	110.6	108.3
1932	73	94	99	68.3	101.9	100.1
1933	73	95	99	65.1	98.4	95.8
1934	72	97	91	59.5	88.6	83.4
1935	71	92	92	60.3	91.9	74.9
1936	66	83	84	61.3	93.3	85.3
1937	76(67)	101	90	*	88.1	82.2

*Not available.

†Includes pulmonary and other forms.

Sources: *Canada Year Book* and current bulletins, Vital Statistics Branch, Dominion Bureau of Statistics, Ottawa; Annual Reports of Minister of Health, Quebec; *Bulletin d'Hygiène*, Dept. of Health, Montreal.

N.B. Rates for 1937 are subject to minor correction. Figures for Canada, 1937, are estimates for the first six months of the year only, the corresponding figures for 1936 being shown in brackets.

TABLE III. TUBERCULOSIS CASES AT THE TWO PRINCIPAL INSTITUTIONS IN MONTREAL, 1928-1936

Year	Royal Edward Institute			Institut Bruchési		
	New Cases Diagnosed	Existing Cases	Total	New Cases Diagnosed	Under Care	Total†
1928	307	448	755	*	*	*
1929	305	496	795	501	835	1,336
1930	284	510	794	577	1,142	1,719
1931	332	562	894	628	1,349	1,977
1932	325	598	923	599	1,659	2,258
1933	419	623	1,042	769	1,886	2,655
1934	339	792	1,131	599	2,138	2,737
1935	345	870	1,215	553	2,485	3,038
1936	313	897	1,210	533	2,569	3,102

*Figures for 1928 not comparable.

† The totals of all patients examined in the course of the year are somewhat higher.

TABLE IV. INCIDENCE OF ILLNESS AND MALNUTRITION AMONG A SAMPLE GROUP OF UNEMPLOYED FAMILIES
(Unemployment Cases only. Family Welfare Association, Montreal, 1937)

District	Number of families	Individuals		Illness		Malnutrition (children)	
		Adults	Children	Individuals	Rate per family %	Number	%
Uptown	37	43	64	25	46	53	83
West	16	35	48	6	25	15	31
North	48	94	145	44	63	19	13
Rosemount	38	88	105	45	79	9	9
East	26	48	66	8	19	16	24
South	55	101	142	53	64	17	12
Verdun, Pt. St. Charles	65	91	152	48	49	30	20
Total (a)	285	500	722	229	54	159	22

(a) Includes only cases in which unemployment was the major problem. Excludes all old age cases.

TABLE Va. QUARTILE HEIGHTS OF CHILDREN FROM FAMILIES OF THREE
SOCIO-ECONOMIC GRADES, AND RANGE OF MOST TYPICAL HEIGHTS
(Measurements in all three columns in inches)

Age	I High Income			II White-collar, Skilled			III Low Income		
	Q ₁ *	Q ₂ *	Q D	Q ₁	Q ₂	Q D	Q ₁	Q ₂	Q.D
7	48 0	51 0	1 5	47 0	50 0	1 5	46 0	49.0	1 5
8	50 0	53 0	1 5	49 0	51 8	1 4	48 0	51 0	1.5
9	52 0	55 0	1 5	51 0	54 0	1 5	50 0	52 5	1 3
10	53 5	57 0	1 8	53 0	56 0	1 5	51 5	54.5	1 5
11	55 3	58 5	1 6	54 3	57 8	1 8	53 3	56 3	1.5
12	57 3	60 8	1 8	56 0	60 0	2 0	55 0	58 5	1.8
13	59 3	63 8	2 3	58 0	63 0	2 5	57 0	61 0	2 0
14	61 5	66 5	2 5	57 8	62 4	2 3	59 0	63 5	2 3
15	64 8	68 8	2 0	60 0	63 8	1 9	60 4	65 8	2.7

*See footnote to p. 151

TABLE Vb QUARTILE WEIGHTS OF CHILDREN FROM FAMILIES OF THREE
SOCIO-ECONOMIC GRADES, AND RANGE OF MOST TYPICAL WEIGHTS
(Measurements in all three columns in pounds)

Age	I High Income			II White-collar, Skilled			III Low Income		
	Q ₁ *	Q ₂ *	Q D *	Q ₁	Q ₂	Q D	Q ₁	Q ₂	Q.D.
7	51.0	60 0	4 5	49 0	56.6	3 8	47.0	55 0	4.0
8	56 0	66.0	5 0	54 0	63 0	4 5	52 0	60 0	4 0
9	60.0	71 0	5 5	59 0	70 0	5 5	55.8	66.0	5.1
10	66.0	78.0	6 0	65 0	77 0	6.0	62 0	72 5	5 3
11	71.0	85 0	7 0	69 0	84 0	7.5	66 8	80 0	6.6
12	77 0	95 0	9 0	75 0	89 5	7 3	72 0	88 5	8 3
13	84.0	108.0	12.0	80 3	102 5	11 1	77.3	97.3	9.9
14	96 0	123 0	13 5	83 5	107 0	11 8	85 3	112.0	13 4
15	105 0	122 0	8 5	92 0	118 0	13 0	90 3	119.5	5 1

*The quartile deviation (Q D) is based on the weights (or other measurement) one-quarter and three-quarters of the way along the group if all weights are placed in order of size. Along with the median it thus expresses conveniently all the values found within the "middle half" of the total data. E.g. 60±5 indicates that the most important or representative half of all the weights recorded range from 55 to 65 pounds.

TABLE VI DATA OF TONSILS EXAMINATIONS OF SCHOOL AGE BOYS
GROUPED BY SOCIO-ECONOMIC STATUS (WESTMOUNT)¹

Age	Total Cases	A (Slight Defects)	B (More Pronounced)	C (Immediate Attention)	Total %
<i>Group I</i>					
7	316	148	39	2	59.8
8	373	198	36	4	63.8
9	409	237	38	1	67.5
10	440	255	43	5	68.9
11	436	257	35	3	67.7
12	434	269	20	1	66.8
13	397	221	20		60.7
14	334	198	18		64.7
15	265	162	8		64.2
Total	3,306	1,945	257	16	67.0
<i>Group II</i>					
7	32	15	6		65.6
8	37	18	9	3	81.1
9	40	20	6	1	67.5
10	46	26	4	2	69.6
11	52	27	8	2	71.2
12	53	31	4		66.0
13	50	27	4		62.0
14	54	27	9		66.6
15	45	24	3		60.0
Total	409	215	53	8	67.5
<i>Group III</i>					
7	27	11	6		63.0
8	31	16	4		64.5
9	27	11	4	1	59.3
10	29	15	3	1	65.5
11	29	13	5	1	65.5
12	26	11	7		69.2
13	20	12	3	1	80.0
14	18	10	1		61.1
15	14	8			57.1
Total	221	107	33	4	65.2

Group I high income skilled and relief Group II white-collar and skilled Group III low-

¹See Chapter 17

TABLE VII AVERAGE WEIGHT AT GIVEN HEIGHTS, OF CHILDREN AGED 7-15
(Compiled from records for Montreal school children of various economic
classes 1931-6)*

Height		Weight		Height		Weight	
ft	ins	lbs		ft	ins	lbs	
3	9	45	0	4	10	81	6
3	10	47	2	4	11	85	3
3	11	49	6	5	0	89	7
4	0	51	9	5	1	93	7
4	1	54	2	5	2	98	6
4	2	56	9	5	3	104	6
4	3	59	6	5	4	111	0
4	4	62	7	5	5	116	5
4	5	65	4	5	6	121	3
4	6	68	2	5	7	125	8
4	7	71	6	5	8	129	8
4	8	74	7	5	9	133	4
4	9	78	2	5	10	136	9

*This table gives the readings from a smoothed curve based on the points plotted at median weights for each height, summarizing 6,413 height-weight entries

TABLE VIII INDEX NUMBERS OF RETAIL PRICES, CANADA, 1926-1937

Year	1926=100		1933=100	
	Food	Cost of Living*	Food	Cost of Living*
1926	100 0	100 0	157 0	129 0
1929	101 0	99 9	158 5	128 9
1930	98 6	99 2	154 8	128 0
1933	63 7	77 5	100 0	100 0
1934	69.4	78 6	108 9	101 4
1935	70 4	79 1	110 5	102 0
1936	73 4	80 8	115 2	104 2
1937	76 9	82 9	120 7	106 7

*Food, rent, fuel, clothing and sundries

TABLE IX EMERGENCY STANDARD BUDGET FOR A SELECTED
FAMILY OF FIVE QUANTITIES AND COST
(One year average Canadian prices for 1936)

Commodity	Unit	Moderately Active Man	Moderately Active Woman	Girl 11-13	Boy 7-8	Child under 4	Price (per unit)	Total Cost
							cents	\$
<i>Flour, Cereals</i>								
White bread	lb	60	35	35	35	20	6 4	11 84
Rye bread	lb	10	10	10	5		7 0	2 45
Whole wheat bread	lb	60	45	45	40	20	6 4	13 44
White flour	lb	105	65	65	60	30	3 6	11 70
Rice	lb	10	10	10	10	5	7 9	3 55
Macaroni	lb	20	10	10	5	5	8 0	4 00
Rolled oats	lb	30	25	25	20	10	5 2	5 72
Corn meal	lb	30	25	25	25	10	5 2	5 98
<i>Meat, Fish, etc</i>								
Pink salmon (cans)	lb	3	3	3	1		21 7	2 17
Eggs	doz	6	8½	8½	10	10	27 9	12 00
Plate beef	lb	6	6	5	2		12 3	2 33
Chuck beef	lb	10	7	7	8		10 1	3 23
Breast of lamb	lb	3	2	1	1		12 0	84
Picnic ham	lb	18	10	6	3		20 1	7 44
<i>Milk, etc</i>								
Fresh milk	qt	51	51	92	92	95	10 3	39 24
Evaporated milk (cans)	14½ oz	32	32	102	102	102	10 3	27 75
Cheese	lb	4	4	1	1		21 4	2 14
<i>Fats</i>								
Bacon	lb	13	10	13	13	5	30 0	16 20
Salt pork	lb	8	3	1	1		19 9	2 59
Lard	lb	6	2	1	1		16 6	1 66
Butter	lb	20	17	15	15	5	27 9	20 08
Margarine	lb	8	3				19 0	2 09
<i>Vegetables</i>								
Potatoes	lb	160	140	140	125	100	2 23	14 83
Navy beans	lb	15	9	6	6		5 8	2 09
String beans (cans)	1¼ lbs	4	4	4	4	2	12 6	2 27
Carrots	1¼ lbs	13	13	13	13	7	0 5	2 95
Peas	1¼ lbs	12	4	4	3		5 0	1 15
Peanut butter	1¼ lbs	13	12	10	9		12 0	5 28
Corn (cans)	1¼ lbs	8	7	6	6	1	11 9	3 32
Onions	1¼ lbs	10	10	9	5	2	4 6	1 66
Tomatoes (cans)	1¼ lbs.	22	22	22	22	22	11 9	13 09
Spinach	lb	6	14	14	14	12½	6 0	3 63
Cabbage	lb	13	13	13	8	5	3 0	1 56
Lettuce	hd	4	7	7	7	4	7 7	2 25
<i>Fruits</i>								
Prunes	lb	11	7	6	4	3	11 1	3 44
Raisins	lb	4	3	2	2		16 5	1 82
Apples	lb	15	15	16	10	5	6 1	3 75
Bananas	doz.	4	3	2	2	1	15 0	1 80
Oranges	doz.	6	6	6	6	6	16 7	5 00

TABLE IX—*Continued*

Commodity	Unit	Moderately Active Man	Moderately Active Woman	Girl 11-13	Boy 7-8	Child under 4	Price (per unit)	Total Cost
<i>Sugars</i>							cents	\$
Granulated sugar	lb	50	38	34 $\frac{3}{4}$	26 $\frac{1}{2}$	6 $\frac{1}{4}$	6 2	9 64
Corn syrup (cans)	24 oz	14	4	3	2	1	16 8	4 03
Molasses (cans)	18 oz	8	4	3	2	1	12 7	2 28
<i>Accessories</i>								
Tea	lb	6 $\frac{1}{2}$	6 $\frac{1}{2}$				52 0	6 76
Coffee	lb	26	26				27 0	14 04
Cooking materials condiments	*	85	85	50	50	28	*	2 98
(Cod liver oil)	lb					11 4	100	(11 40)
Total (\$)								310 76

Source U. S. Department of Agriculture Circular, 296, or W P A (Division of Social Research) Bulletin I, 21, Washington, D C A few modifications, mostly minor, have been made in using these budgets.

Notes:

(a) All cans except where otherwise specified are No 2 cans, weighing about 20 ounces

(b) One head of lettuce weighs from half to one pound, average of three-quarters of a pound assumed

(c) Cheap coffee, averaging 27 cents a pound, included here D B S average price for 1936 was 36 cents.

(d) Six teaspoonfuls cod liver oil equal 1 ounce Minimum recommended by O M A is 3 teaspoonfuls a day for children (assumed given only to child under 4 in above budget).

*Condiments, spices, baking powder, soda, etc One per cent of the total itemized food budget is added to allow for these

SUPPLEMENTARY NOTES

A DEFINITION OF PUBLIC HEALTH, HEALTH INSURANCE, ETC

"*Public Health* services may or may not develop ultimately along such lines as to include the provision of medical, nursing and dental health care to the individual, on an organized group basis, but so far in Canada, public health services have been restricted to protection of the community through measures designed to provide control of sanitation, the milk supply, etc., the prevention and control of communicable disease, general health education of the public, health examination and teaching in the schools, etc., and generally the operation of such clinics and services as were designed 'to keep well people well'. Those in need of actual care are referred to the private practitioner. In some provinces, clinical services have been gradually extended to provide actual remedial treatment as well, while in the treatment of certain diseases such as cancer and tuberculosis, the trend is undoubtedly to provide complete care through the public services. This responsibility is already accepted in most of the provinces in the care of mental diseases. Consequently, the tendency towards the gradual modification of public health services to embrace a programme of actual state medicine is a definite fact in many parts of Canada today. As the Ontario Medical Association has put it, 'evidence is at hand to show that the principle of state responsibility for the medical care of the people is becoming universally recognized'. It is when this public assumption of control of medical services is contemplated that the alternatives of state medicine or state health insurance arise.

"*State Medicine* is defined well in the Alberta Royal Commission report on the subject as 'a system of medical administration by which the state provides medical services for the entire population (or a large group thereof) and under which all practitioners are employed, directed, and paid, by the state on a salary basis'.

"*State Health Insurance* is defined in the same report as a system of health insurance under which a non-profit-earning, state supervised organization administers a fund provided through regular periodic contributions for 'the mutual provision of medical services for the beneficiaries included under the system'. Thus a mutual, contributory partnership of potential beneficiaries is an essential feature of any plan that can be accurately termed 'insurance'.

"'*Medical Relief*,' apart from these three fundamental terms, is probably the only term that can be accurately applied to the sporadic measures thrown up in so many parts of Canada to-day, whereby some purely arbitrary lump sum or per capita allowance is being paid over to groups of private practitioners or individual practitioners to apply against the cost (or an agreed schedule) of such measure of medical care as they may variously provide, upon the direct application of the individual dependent or his family, in receipt of unemployment relief."

(From *Social Work and the People's Health*, Canadian Welfare Council, publication 84, 1936, pp 13-14.)

B RECENT DEVELOPMENTS IN MEDICAL CARE FOR DEPENDENTS
IN SASKATCHEWAN¹

The continuous distress due to drought in Saskatchewan led the organized medical profession, in August 1937, to present a plan to the provincial government to ensure medical attention to virtually all persons in the province who were unable to afford such services by themselves. The physicians as a body felt that a crisis had been reached, as a serious exodus of medical practitioners from these areas was being contemplated, if not actually under way. Many large districts were liable to be left without a doctor, and the burden placed on those remaining in neighbouring districts might precipitate a collapse of medical service. The plan, which was endorsed by the Saskatchewan Medical Convention and approved by the Province, is now in operation under the administration of the Department of Public Health together with a Supervising Committee composed of three appointees of the Saskatchewan College of Physicians and Surgeons.

Doctors are divided into three classes according to their particular type of practice, as follows:

(1) "Class A" doctors are doctors in relief areas whose practices are wholly or chiefly of a rural nature. For these a basic retaining grant has been made available, guaranteeing a cash income from medical practice of \$150 per month from all sources. In other words, where gross medical cash receipts fall below \$150 in any one month, a grant is available under this plan up to \$150 monthly maximum. An additional mileage allowance is available up to a maximum of \$100 in any one month for necessary transportation to and from relief patients² on the basis of ten cents per mile for summer driving and twenty cents per mile for winter driving.

(2) "Class B" doctors are doctors in the smaller hospital centres who are doing authorized referred hospital or office work, and who in addition are engaged in rural medical practice in their adjacent districts. For these doctors a grant is available for necessary work done for relief patients up to a maximum of \$100 in any one month. Such grants are allowed in the amount of one-third of the fees set out in the last schedule approved by the Saskatchewan College of Physicians and Surgeons. An additional allowance for mileage is available at the same rates as for Class A doctors.

(3) "Class C" doctors are doctors in urban centres who are caring for relief patients referred into the cities under proper authorization. Grants are available for these as for Class B physicians up to a maximum of \$100 in any one month, but are allowed only in the amount of 25 per cent of the fees set out in the last schedule of the Saskatchewan College of Physicians and Surgeons.

The patient has free choice of medical attendant wherever possible. Doctors must obtain proper authorization whenever possible from an authorized official of a rural municipality, town or village. If the doctor in charge of an authorized relief patient necessarily requires the additional services of a consultant, surgical assistant, anaesthetist, etc., he is considered the proper authority to enlist such necessary additional services. When it becomes necessary for a patient to be removed from his district for medical services, this must, whenever possible, be done with the knowledge and recommendation of a local doctor, and with proper municipal authorization.

Any payments made to doctors under this plan are considered to be "emergency grants-in-aid for the purpose of assisting medical practitioners in the

¹Thanks are due to Miss V. M. Parr, B.A., for the compilation of this information.

²An Authorized Relief Patient is one who "is actually destitute of means from his own resources of obtaining necessary medical attendance and treatment and shall have a written guarantee for medical services signed by the secretary, or other authorized official, of a rural municipality, town or village".

provision of adequate medical services during the present crisis, and such payments do not release individuals or municipal units from any part of their responsibility as regards payment for medical attendance when conditions improve." Doctors practising under a salary or guarantee contract with a municipality must consider any payments under this plan as salary or guarantee advances and the municipality is credited

Dental Care

In the fall of 1937 the Province assumed responsibility for the provision of dental care for indigents in the relief areas, and the following plan was adopted. Grants vary according to the areas scheduled by reference to the severity of the drought, into which Saskatchewan is now generally divided for relief administration

(a) All dentists practising in the Main Drought Area are eligible for a grant up to the maximum of \$75 per month for services rendered to relief patients in either drought area. The grant is computed in two parts: a basic grant of \$25 per month to assist the dentists in furnishing dental supplies to relief patients, and a further grant up to a maximum of \$50 per month based on a report of the work done. Assessment is at one-third of the regular fees of the Dental Association. (b) All dentists practising in the Marginal Drought Area are eligible for a grant up to the maximum of \$50 per month for services rendered to relief patients from either drought area. The total grant in this case is \$50, \$25 per month to assist the dentists in furnishing dental supplies and a further grant of \$25 for work done. (c) All dentists practising in the cities of Regina, Saskatoon and Moose Jaw are eligible for a grant up to the maximum of \$50 per month for services rendered to relief patients in either drought area, although these cities are not included in the main drought area. Charges for work done by them are assessed at 50 per cent of the schedule of the Dental Association. Patients are not to be treated by city dentists, however, when rural dentists are available.

Under this scheme dentists are not expected to provide dentures. An individual needing dentures must submit a medical certificate, stating that the need is great and health may be impaired if the dentures are not supplied, to the Department of Public Health, where further steps are taken after consideration of each individual case.

The operation of the new plans will be watched with keen interest. It is not certain whether an exodus of medical practitioners can be prevented, nor whether a simple subsidy arrangement is the most efficient method of provision. A possibility which is recognized by a growing number is that the medical relief plans may be made into a more permanent and integral part of the social legislation of the province, leading towards either a health insurance or state medicine organization.

C ASSOCIATED MEDICAL SERVICES, INC

This experiment in group-provision for medical care through a non-profit corporation was opened for subscribers on June 1st, 1937, with a head office in Toronto (for York County) and branches for the counties of Oxford and Norfolk. The provincial charter sets down as the object of the corporation "the provision of any or all services required in the prevention, diagnosis or treatment of illness, as recognized by legally qualified medical practitioners in the Province of Ontario, on a non-profit prepayment and voluntary basis", and empowers it to establish and administer funds for this purpose. Other objects mentioned in the charter are the encouragement of medical research and preventive medicine, and co-operation "with organized medicine in the advancement of the standard of medical service."

The Ontario Medical Association sponsored the institution of the plan in representative demonstration-areas of the province. A group plan already in existence among the members of the Civil Service Association provided a model, and the latter Association contributed some of the initial advances required for organization. The Ontario government co-operates by providing free office space.

The subscriber to Ontario Medical Services pays \$2 a month, with additional sums for dependents as follows: first, \$1 50, second \$1 50, third \$1 25, fourth and each subsequent dependent \$1 00. In return for this continuous subscription, the benefits to which subscribers are entitled at need comprise (1) physician's service in home, office, or hospital, including consultation, X-ray and anaesthetics, (2) surgical procedures which are necessary for health and "within the scope of a competent surgeon", (3) semi-private hospital accommodation as available, or a sum not to exceed \$3 50 a day towards costs, in an approved hospital, medicines in hospital up to a maximum of 50 cents a day, (4) necessary nursing, (5) the costs attendant on childbirth, provided contribution from both parents have been paid for ten consecutive months prior to confinement¹. These scales are based on an estimate of the annual amount of medical service required (in average per-capita terms)², and the schedule of fees laid down by the Ontario Medical Association, as follows:

Service	Amount	Cost
Home calls	1 at \$3	\$3 00
Office calls	1 5 at \$2	3 00
Surgical operations	0 8 at \$50	4 00
Nursing	5 days at \$6	3 00
Hospital	1 3 days at \$3 50	4 50
Specialist, consultants		3 00
X-ray		1 00
Overhead and administration		2 50
Total		\$24 00

To become a subscriber, the procedure is to fill up an application form, which comprises mainly a detailed medical history and a statement on number of dependents. Doctors who decide to participate in the plan fill up a simpler form, the chief items in which are an undertaking to accept the fee-schedule agreed on by the Medical Association and to submit accounts from accredited

¹The cost of hospital care is provided for the child at the rate of \$1 a day up to 14 days after birth, after which the child becomes a separate dependent for whom contributions are necessary for medical care.

²Derived from statistical material of the Committee on the Cost of Medical Care, health insurance in Great Britain and other European countries, etc.

patients to the Corporation. The Corporation has the power to refuse admission to the scheme to any person, doctors have the right to refuse to attend any subscriber after twenty-four hour's notice to the Branch office, or to resign from the scheme by written notice. The intending subscriber chooses his doctor at the time of application. When forms are duly accepted, identification cards are issued to subscribers and certificates to participating doctors.

Medical attention may then be secured under the scheme once the third monthly payment has been made. All kinds of sickness are covered, with certain special exceptions. These are mental illness, chronic tuberculosis, and venereal diseases (for which institutional care is available), conditions which come within the scope of Workmen's Compensation or related legislation, and obstetrical care prior to the first ten months' contributions. Each branch has a Medical Officer to whom application is necessary (except in emergency) to authorize admission to hospital and other special procedures.

The number of persons taking advantage of this scheme has grown rapidly. Membership in Toronto rose from less than a hundred to about 4,000 in nine months, and the plan has had no difficulty in building adequate reserves. It is hoped also that industries will participate in the plan by paying half the cost for their employees, at the date of writing two or three firms have entered or are considering entry on this basis.

It is probably too early to predict how widely this interesting and valuable experiment will extend. But some of its limits are very definite, and in the light of what has been discussed elsewhere,¹ should be clearly stated.

It provides no solution for the problem of mass-coverage, unless it can be assumed that all persons and families with incomes of less than (say) \$2,000 will rapidly take steps to come under the scheme. This is very unlikely. The greater number of present contributors so far are of "white collar" occupational grades. The total of \$6.50 or \$7.50 a month for an average family of four or five is fairly low in relation to middle-group incomes, and undoubtedly preferable to sudden, heavy and unbudgeted expenditures. But they are still large sums for wage-earner budgets of \$1,000 and less, and almost certainly too large for rural families. The scheme is in any case beyond the reach of unemployed or seriously underemployed persons. The plan of state health insurance in British Columbia (which included financial contributions from the government) offered the primary medical services, including dental and optical care, for an average of less than \$2 a month, and estimated the per capita costs of medical benefits comparable to those listed above at \$12.50 a year.² These may not be the figures which are finally satisfactory for Canada as a whole, but they are obviously nearer "the capacity to pay" of the bulk of the population who are most in need of the economies of collective provision.

These economic facts are probably the most important. But even if they were not present, group insurance plans share the weakness of every social welfare service which depends on voluntary initiative. Development takes place piecemeal, often with those who need it most being the last to be covered. In the last resort there is no guarantee that the gaps left by non-co-operating individuals, doctors, or employers can be closed.

The Ontario group insurance plan is favourably regarded by many members of the medical profession because it retains completely the freedom of the doctor (including the right of his organization to set the scale of fees) and involves no governmental control. But if medical care remains inadequate or too costly for large sections of the population, government "intervention" and control is the only answer. Co-operative schemes are a welcome experiment, but neither a complete nor immediate substitute for a state health insurance plan.

¹E.g., pp. 161-5, 205, 217 *et seq.*

²*A Plan of Health Insurance for British Columbia* (Dept. of the Provincial Secretary, Victoria, B.C., 1935), pp. 14, 18.

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